TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1896.

No. 631.

THE CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF SOUTH DAKOTA.

FILED SEPTEMBER 18, 1896.

(12,981.)

(16,981.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1898.

No. 396.

THE CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF SOUTH DAKOTA.

INDEX.

	Page.
Caption	*a*
Bill of complaint	i
Resolution of board of railroad commissioners, August 26, 1897	xxv
Schedule of rates taking effect July 1, 1897	xxix
Answer of attorney general	xxxii
Answer of Tompkins *et al.*, railroad commissioners	xxxiv
Replication	xlv
Order appointing examiner	xlvi
Evidence before the examiner	1
Evidence for complainant	1
Testimony of W. N. D. Winne	2

	Page.
Exhibit 1—Outline map of lines of C., M. & St. P. R'y Co.	4
2—Statement of miles of road by States	6
3—Statement of funded debt to June 30, 1897	9
4—Statement of mortgages, lines in South Dakota	11
5—Statement, entire system, June 30, 1897	13
6—Statement, South Dakota, June 30, 1897	14
7—Condensed statement of earnings and expenses, 1894 to 1897	18
8—Statement of gross earnings in South Dakota for four years ending June 30, 1897	25
9—Statement of gross earnings from all sources, operating expenses, taxes, and interest on funded debt in South Dakota for four years ending June 30, 1897	29
10—Division of revenue as shown on interline way bills from stations on the line of Union Pacific system, month of November, 1897	91
11—Division of revenues as shown on interline way bills from stations on the line of Northern Pacific Co., month of October, 1897, &c.	96
13—Book No. 3, Union Pacific system, taking effect November 1, 1890	110
14—Division sheet No. 11, taking effect April 13, 1896	146
15*a*—Letter, Goll to Dousman, August 23, 1897	155
15*b*—Letter, Hiland to Dudley, November 20, 1891	155
15*c*—Letter, Goll to Dousman, August 20, 1897	156
15*d*—Letter, Goll to Dudley, March 22, 1894	156
15*e*—Letter, Keeley to Dousman, October 12, 1897	157
Testimony of A. C. Bird	166
Exhibit 16—Statement of rates	175
Testimony of Albert J. Earling	219
Exhibit 22—Statement of the cost to maintain and operate the lines of the C., M. & St. P. R'y in South Dakota	235
23—Statement of maintenance and operation of lines in South Dakota	300
Testimony of William H. Truesdale	308
C. H. Chappell	333
A. C. Bird (recalled)	349
D. J. Whittemore	393
Exhibit 25—Estimated cost of C., M. & St. P. R'y in South Dakota	423
Testimony of W. G. Collins	431
Onward Bates	453
Exhibit 26—Summary of buildings and stations in South Dakota, S. C. & D. division	480
27—Estimated cost of buildings in South Dakota, S. C. & D. division	486
Testimony of A. E. Manchester	526
Roswell Miller	538
Part II of the report of the committee on railway statistics	552
Testimony of D. J. Whittemore (recalled)	555
W. N. D. Winne (recalled)	556
Exhibit 28—Statement of equipment assigned to lines in South Dakota	563

Page.

Exhibit 29—Statement of total passenger earnings in South Dakota for six months ending October 31, 1896 564
30—Statement of tonnage and revenue accruing on freight traffic billed from Aberdeen and Sioux Falls under terminal tariffs during year ending June 30, 1897, and revenue which would have been received on same traffic under proposed scale of rates 565
31—Statement of gross earnings, operating expenses, net earnings, interest on bonds, &c., in South Dakota for four years ending June 30, 1897 566
32—Statement of earnings on entire system for four years ending June 30, 1897 568
Testimony of J. T. Harahan 584
W. N. D. Winne (recalled) 608
Exhibit 33—Freight statistics, line in South Dakota, September, 1896 610
34—Revenue train mileage for year ending June 30, 1897. 610
35—Net earnings to December 31, 1897 610
36—Equipment purchased, January 1, 1884, to December 31, 1897 611
Testimony of A. J. Earling (recalled) 617
B. F. Mayer 623
George B. Harris 639
Evidence for defendants 659
Testimony of R. J. Booth 659
Exhibit 43—Drawing 667
44—Drawing 668
45—Drawing 669
46—Drawing 670
47—Drawing 671
48—Drawing 672
49—Drawing 673
50—Drawing 674
37—Contract price of buildings at Egan, S. D 677
38—Contract price of buildings at Woonsocket, S. D. 678
39—Contract price of buildings at Harrisburg, S. D. 679
40—Contract price of buildings at Vilas, S. D. 680
41—Contract price of buildings at Sioux Falls, S. D 681
42—Contract price of buildings at Mitchell, S. D. 682
51—Estimate of cost of a standard station 685
Extracts from report of C., M. & St. P. R'y Co., &c 703
Exhibit 52—Statement of commodities transported during the years ending June 30, 1895, 1896, and 1897 717
Testimony of K. Nelson 718
Maurice Connell 739
Exhibit 53—Statement by A. J. Earling as to passenger and freight car mileage in South Dakota for year ending June 30, 1897. 746
54—Annual statement to State board of assessment and equalization for year ending April 30, 1897 747
Testimony of C. C. Crandall 760
W. H. Tompkins 765

	Page.
Exhibit 56—Annual expenditures for repairs	768
57—Statement of net earnings	771
58—Statement of amounts paid for interest and dividends	773
59—Statement furnished commissioners by auditor of complainant	775
60—Statement of longest, shortest, and average haul	781
61—Percentages of earnings between C., M. & St. P. R. R. and U. P. R. R.	783
62—Statement of freight and passenger traffic in South Dakota, September, 1897	784
63—Statement of freight and passenger earnings for year ending June 30, 1897	787
64—Statement of earnings, &c., for six months ending December 31, 1897	789
65—Page 71, Annual Report 1895	795
66—Page 61, Annual Report 1897	797
67—Pages 43 and 45, Annual Report 1897	798
68—Schedule governing local freight traffic in South Dakota	801
69—Blank form for material report	805
Testimony of H. W. Sawyer	807
W. T. La Follette	813
N. O. Whitney	837
Exhibit 70—Drawing	845
71—Drawing	846
Testimony of E. L. Smith	855
N. O. Whitney (recalled)	856
Exhibit 72—Monthly statement of performance of engines for month ending February 27, 1898	889
Testimony of H. W. Sawyer (recalled)	890
Exhibit 73—Table of rates in force on live stock	891
Testimony of Alexander Kirkpatrick	892
John O'Brien	903
W. B. Cronk	907
J. B. Moll	918
Evidence for complainant in rebuttal	919
Testimony of H. R. Williams	919
D. J. Whittemore (recalled)	924
W. N. D. Winne	930
Exhibit 74—Equipment in service June 30, 1897	932
75—Statement of gross earnings, &c., to December 31, 1897	936
Evidence for defendants	939
Testimony of D. J. Whittemore (recalled)	939
Exhibit 76—Drawing	940
77—Drawing	941
78—Drawing	942
Evidence for complainant in rebuttal	943
Testimony of S. Sanborn	943
Evidence for defendants	955
Testimony of W. N. D. Winne (recalled)	955
Onward Bates	957

	Page.
Exhibit 79—Statement as to bridges in South Dakota, June 30, 1897.	958
Examiner's certificate	959
Report of examiner, &c.	959
Decree	962
Assignment of errors	964
Petition for appeal	966
Journal entry of allowance of appeal	967
Order allowing appeal	967
Consent as to bond	968
Bond on appeal	969
Stipulation as to record on appeal	970
Opinion of Carland, J	970
Clerk's certificate	981
Stipulation as to printing record	982

In the Circuit Court of the United States within and for the Southern Division of the District of South Dakota.

Chicago, Milwaukee & St. Paul Railway Company, Complainant, *vs.* Wm. H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, *et al.*, Defendants.	In Equity.	No. 286.

Pleas before the Honorable John E. Carland, judge of the circuit court of the United States of America for the district of South Dakota, sitting as the presiding judge of said court, at the April term, A. D. 1898, of said court, held in the city of Sioux Falls, in said district, in the year 1898.

District of South Dakota, *sct:*

Be it remembered that this cause came on regularly for hearing at the above term of said court on pleadings and proofs on the 27th day of June, A. D. 1898, upon which day the report of the duly authorized and qualified special examiner was filed herein; which said report comprised a printed record of this cause and contained all of the pleadings and a copy of the exhibits introduced by the respective parties herein; which said report is in words and figures the following, to wit:

IN THE

Circuit Court of the United States.

DISTRICT OF SOUTH DAKOTA.

Chicago, Milwaukee & St. Paul Railway Company,

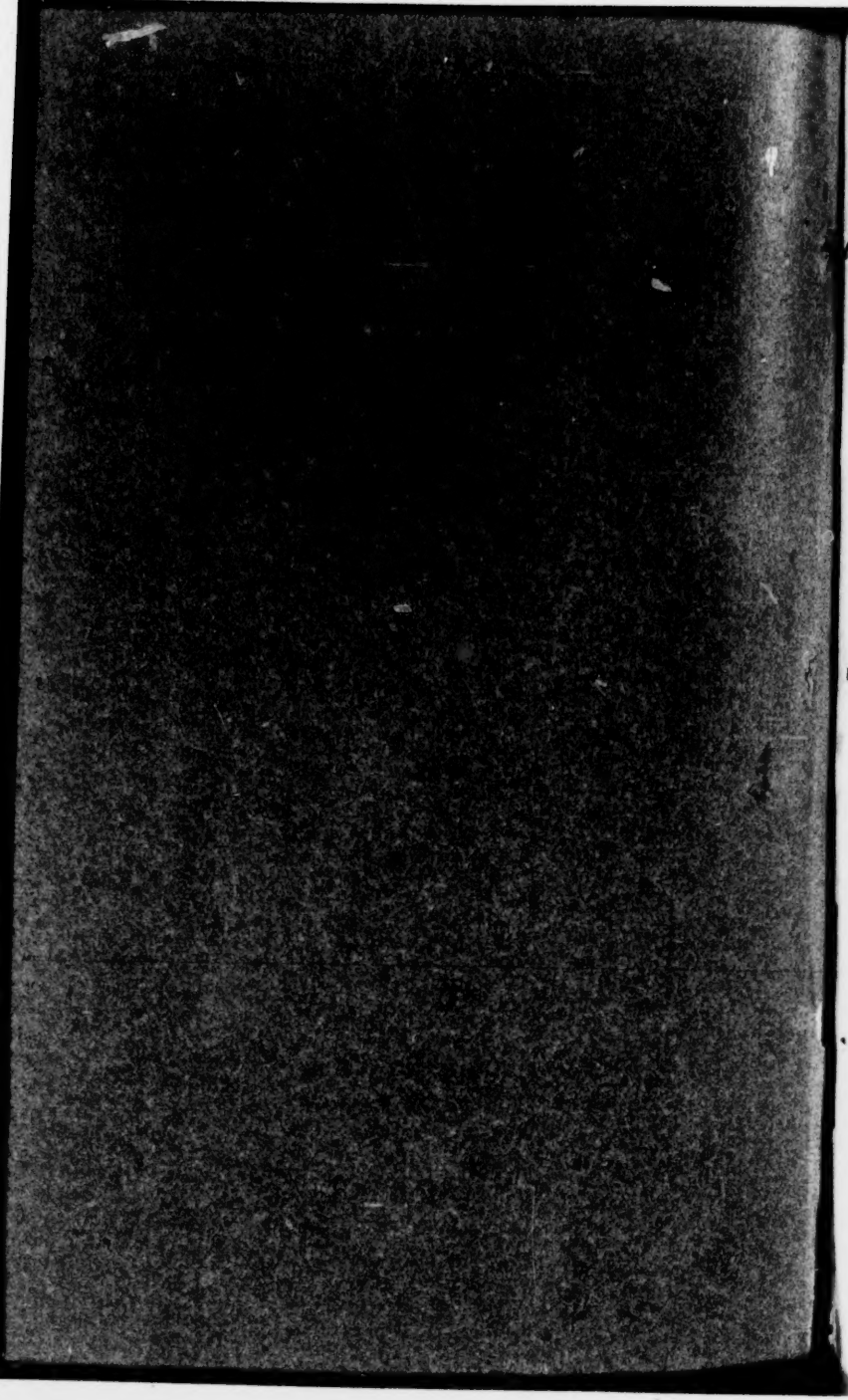
Complainant,

vs.

Wm. H. Tompkins, W. T. La Follette and Alexander Kirkpatrick, constituting the Board of Railroad Commissioners of the State of South Dakota, etc.,

Defendants.

PLEADINGS AND PROOFS.



IN THE

Circuit Court of the United States,

DISTRICT OF SOUTH DAKOTA.

Chicago, Milwaukee & St. Paul Railway Company,
Complainants,
vs.
Wm. H. Tompkins, W. T. La Follette and Alexander Kirkpatrick, constituting the Board of Railroad Commissioners of the State of South Dakota, et al.,
Defendants.

PLEADINGS AND PROOFS.

CHICAGO:
THE GUNTHORP-WARREN PRINTING COMPANY.
1898

COMPLAINANT'S WITNESSES.

Bates, Onward—
direct examination 453
cross-examination 456
re-direct examination 478
recalled, direct examination 957
cross-examination 958
Bird, A. C.—
direct examination 166
cross-examination 183
re-called, cross-examination 349
re-direct examination 366
re-called, direct examination 381
cross-examination 386
Chappell, C. H.—
direct examination 333
cross-examination 341
Collins, W. G.—
direct examination 431
cross-examination 435
Earling, A. J.—
direct examination 219
cross-examination 247
re-direct examination 299
re-cross examination 307
re-called, cross-examination 617
Harahan, J. T.—
direct examination 584
cross-examination 597
Harris, Geo. B.—
direct examination 639
cross-examination 650
Manchester, A. E.—
direct examination 526
cross-examination 531
re-direct examination 537
Mayer, B. F.—
direct examination 623
cross-examination 634

Miller, Roswell—
direct examination 538
cross-examination 546
Sanborn, S.—
direct examination 943
cross-examination 947
Truesdale, Wm. H.—
direct examination 308
cross-examination 316
re-direct examination 327
re-cross examination 328
Whittemore, D. J.—
direct examination 393
cross-examination 409
re-direct examination 425
re-cross examination 426
re-direct examination 431
re-called, direct examination 555
re-called, direct examination 924
cross-examination 927
re-direct examination 929
re-cross examination 930
re-called, direct 939
Winne, W. N. D.— i
direct examination 1
cross-examination 36
re-direct examination 157
re-cross examination 163
re-direct examination 164
re-cross examination 165
re-called, direct examination 556
cross-examination 570
re-called, cross-examination 608
re-direct examination 613
re-cross examination 616
re-called, direct examination 930
cross-examination 937
re-direct examination 938
re-called, direct examination 955

DEFENDANTS' WITNESSES.

Booth, R. J.—
direct examination 659
cross-examination 692
Connell, Maurice—
direct examination 739
cross-examination 745
Crandall, C. C.—
direct examination 760
cross-examination 761
re-direct examination 761
Cronk, W. B.—
direct examination 907
cross-examination 915
re-direct examination 916
re-cross examination 917
re-re-direct examination 917
Kirkpatrick, Alexander—
direct examination 892
cross-examination 901
La Follette, W. T.—
direct examination 702
recalled, direct examination 813
cross-examination 821
re-direct 834
re-cross examination 836
Moll, J. B.—
direct examination 918
cross-examination 919
Nelson, Knute—
direct examination 718
cross-examination 736
re-direct examination 737
O'Brien, John—
direct examination 903
cross-examination 907
Sawyer, H. W.—
direct examination 807
cross-examination 811
recalled, direct examination 812
recalled, direct examination 890

Smith, E. L.—
direct examination 855
cross-examination 856
Tompkins, W. H.—
direct examination 765
cross-examination 789
recalled, direct examination 790
recalled, cross-examination 793
Whitney, N. O.—
direct examination 837
recalled, direct examination 856
cross-examination 860
re-direct examination 888
Williams, H. R.—
direct examination 919
cross-examination 923
re-direct examination 924

IN THE

Circuit Court of the United States,

FOR THE DISTRICT OF SOUTH DAKOTA,

IN AND FOR THE SOUTHERN DIVISION.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Complainant,

vs.

W. H. TOMPKINS, W. T. LaFOLLETTE and ALEXANDER KIRKPATRICK, constituting the Board of Railroad Commissioners of the State of South Dakota, and MELVIN GRIGSBY, Attorney General of said State,
Defendants.

To the Honorable, the Judges of the Circuit Court of the United States, for the District of South Dakota, sitting in equity:

The Chicago, Milwaukee and St. Paul Railway Company brings its bill of complaint against William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, as railroad commissioners of the State of South Dakota, and Melvin Grigsby, as attorney general of said State of South Dakota, the Press Publishing Company, and the Call Printing Company, and thereupon your orator complains and alleges:

I.

That your orator is a corporation created by and existing under the laws of the State of Wisconsin, and a citizen of the State of Wisconsin, having its principal office in the City of Milwaukee in said state.

II.

That the said William H. Tompkins, W. T. LaFolette, Alexander Kirkpatrick, and Melvin Grigsby, are citizens of the said State of South Dakota, and each of them is an inhabitant and resident of the said District of South Dakota, and that the said defendant, the Press Publishing Company, is a corporation organized and existing under the laws of the State of South Dakota, with its office and principal place of business at the City of Sioux Falls, in said state; that said Call Printing Company is a corporation, existing under the laws of South Dakota, or a partnership, and that both of said last named defendants are citizens of the State of South Dakota.

III.

Further complaining your orator shows: That the said defendants, William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, are the duly qualified and acting railroad commissioners of the State of South Dakota, and constitute the Board of Railroad Commissioners of said state: that said Melvin Grigsby is the duly qualified and acting attorney general of said State of South Dakota; that said defendants reside at the following places in said state, to-wit, William H. Tompkins at Rapid City, Pennington County, in the Western division of the District of South Dakota; Alexander Kirkpatrick, Hand County, in the Central division of the District of South

Dakota, and W. T. LaFolette at Chamberlain, Brule County, in the Southern division of the said District of South Dakota, and that said Melvin Grigsby resides at the City of Sioux Falls, in the Southern division of said district.

IV.

That your orator, under and by virtue of its charter, is empowered to own, operate, construct and maintain lines of railroad in Wisconsin and in other states, and under and by virtue of said charter and laws of Wisconsin, and of the laws of the State of South Dakota, it has acquired and now owns, maintains and operates, certain lines of railroad in the State of South Dakota, as follows, to-wit:

(1.) A certain line extending from the east line of said State of South Dakota, at or near Canton, in a north-westerly direction, to Chamberlain, in said state, a distance of about one hundred and forty-nine and seventy-seven one hundredths (149.77) miles, and which said line from Canton to Chamberlain is a part of what is commonly known as the Iowa and Dakota division of the Chicago, Milwaukee and St Paul Railroad.

(2.) A small portion of the line from Rock Valley, Iowa, to Hudson, South Dakota, being that portion of said line in the State of South Dakota, extending from the state line to Hudson, a distance of thirty-nine one hundredths (39/100) of a mile, and is a part of the Iowa and Dakota division.

(3.) A certain line extending from Marion Junction, in said State of South Dakota, in a south-westerly direction, to Running Water, on the south line of said State of South Dakota, a distance of about sixty-two and eighty-five one hundredths (62.85) miles, and being a part of said Iowa and Dakota division.

(4.) A certain line, extending from the east line of said State of South Dakota, at a point between Airlie and Flandreau, and running in a westerly direction to Woonsocket, in the State of South Dakota, a distance of about ninety-seven and twenty one hundredths (97.20) miles, and composing a part of what is commonly called the Southern Minnesota division of the Chicago, Milwaukee and St. Paul Railroad.

(5.) A certain line extending from Madison, in said State of South Dakota, in a northerly direction, to Bristol, in said state, a distance of about one hundred and three and two one hundredths (103.02) miles, and composing a portion of said Southern Minnesota division.

(6.) A certain line, extending from White Rock, in South Dakota, to Ortonville, in Minnesota, and comprising a portion of what is commonly known as the Fargo line, and of said line there is in the State of South Dakota only one and twenty-eight one hundredths (1.28) of a mile.

(7.) A line extending from the East line of South Dakota, at a point near Big Stone City, in a westerly direction, to Aberdeen, in said State of South Dakota, a distance of about one hundred and seven and two one hundredths (107.02) miles, comprising or composing a part of the Hastings and Dakota division.

(8.) A certain line extending from Milbank, in the said State of South Dakota, in a north-westerly direction to Sisseton, in said state, a distant of about thirty-seven and twenty-four one hundredths (37.24) miles, comprising a portion of the Hastings and Dakota division.

(9.) A certain line extending from Andover, in said State of South Dakota, in a northerly direction, to the north line of said state, at or near Newark, a distance of about thirty-eight and seventy-one one hundredths (38.71) miles, and composing a portion of the Hastings and Dakota division.

(10.) A certain line extending from Mitchell, in said State of South Dakota, in a northerly direction to the north line of South Dakota, at or near Winship, a distance of one hundred and sixty-one and three one hundredths (161.03) miles, and composing a part of what is commonly called the James River division of the said Chicago, and Milwaukee and St. Paul Railroad.

(11.) A certain line extending from Aberdeen, in said State of South Dakota, in a westerly direction, to Bowdle, a distance of fifty-seven and two one hundredths (57.02) miles, and com posing a portion of the said James River division.

(12.) A certain line extending from Orient, in said State of South Dakota, northerly to Eureka, in said state, a distance of about sixty-seven and thirty-eight one hundredths (67.38) miles, and comprising a portion of the James River division.

(13.) A certain line extending from the state line of South Dakota, at or near McCook, in the south-east corner of said state, running in a north-westerly direction to Scotland Junction, in said state, a distance of eighty-two and twenty-two one hundredths (82.22) miles, and comprising a portion of what is commonly called the Sioux City and Dakota division.

(14.) A certain line extending from Scotland, in said state, in a north-westerly direction, to Mitchell, in said state, a distance of about forty-seven and sixty-seven one hundredths (47.67) miles, and comprising a portion of said Sioux City and Dakota division.

(15.) A certain line extending from Tripp, in said State of South Dakota, westerly to Armour, in said state, a distance of about twenty and forty-five one hundredths (20.45) miles and comprising a portion of said Soux City and Dakota division.

(16.) A certain line extending from Elk Point, near the

south and east line of said State of South Dakota, in a northerly direction, to Sioux Falls Junction, in said state, a portion of said line being in the State of Iowa, and that portion of the line in the State of South Dakota being about sixty-seven and eighty-one one hundredths (67.81) miles, and comprising a portion of the said Sioux City and Dakota division.

The above described lines of your orator in South Dakota constitute a total mileage so owned, operated and controlled by your orator as aforesaid, under the powers, rights and franchises with which it has, by said charter and laws become duly vested of about one thousand, one hundred and one and six one hundredths (1,101.06) miles, in the said State of South Dakota.

V.

Further complaining, your orator shows that, under and by virtue of its charter and the laws of Wisconsin, and of the other states, hereinafter mentioned, it has constructed or acquired and now owns, controls and operates a large system of railroad, aggregating about 6,150.75 100 miles, located in the States of Wisconsin, Illinois, Iowa, Missouri, Minnesota, North Dakota, South Dakota and Michigan.

Your orator further shows that, in constructing and acquiring said system of railroad, it has expended large sums of money for right of way, ties, iron, grading, bridging, equipment, and for all the facilities and appliances necessary in the operation of a railway; and that it has, at great cost, acquired terminals and terminal facilities at various cities and towns, to and through which said system of railroad extends.

And your orator further shows that, all of said railway, including that portion in the State of South Dakota, was constructed and acquired honestly and at a fair and reasonable

cost; that it was judiciously located and has at all times been operated economically and honestly.

Your orator further shows that, its capitalization in bonds and stocks amount to thirty-four thousand, five hundred dollars ($34,500.00) per mile of its entire system; that such capitalization is not only a fair and reasonable one, but that a much larger amount would be required to reproduce the said system of railroad; that its fixed charges are no more than were absolutely required to produce or acquire said property and its equipment, facilities and terminals; that all of said above described lines in South Dakota secure and receive their due, fair and reasonable proportional benefit of all said equipment, facilities and terminals, and the value of said lines and said property in South Dakota, and their capacity for serving the public are thereby proportionately increased and augmented.

Your orator further shows that the cost of constructing and replacing said railroad in said South Dakota and of providing and furnishing the equipment and terminals above mentioned, as well as constructing and replacing today its said entire system of railroad, would each largely exceed the original cost of constructing the same.

And your orator shows that in no year since the construction of said lines of railroad in the State of South Dakota have the entire gross earnings from all sources from such lines in South Dakota been sufficient to pay the operating expenses, taxes and a fair return upon the actual cost of constructing, or the cost today of replacing said property.

And your orator shows that its bonded indebtedness upon said lines in South Dakota is a fair and reasonable one, and that as hereinafter shown said lines have during the past six years earned less than sufficient to pay the operating expenses and taxes upon said lines and interest on said bonded indebtedness in an amount averaging more than $800,000 each year.

VI.

Further complaining, your orator alleges and shows that the legislature of the State of South Dakota at its last session passed, and that on February 3, 1897, the governor of said state approved a certain act, entitled: "An Act to regulate common carriers and the charges for transportion of passengers and freight by common carriers within the State of South Dakota and to confer upon the Board of Railroad Commissioners certain powers in relation thereto, and to provide for the enforcement of the orders and regulations of said commissioners."

And your orator further alleges and shows that in and by said act it is provided among other things that the said Board of Railroad Commissioners of South Dakota are thereby empowered and directed to make for such of the railroad corporations doing business in said state a schedule of maximum fares and rates of charges for the transportion of passengers, freight and cars; and to make classification of freights, and to fix the schedule of maximum passenger fares at a rate not more than three (3) cents per mile for the transportation of any person with ordinary baggage, not exceeding one hundred and fifty (150) pounds in weight. And said defendants claim and assert that under and by virtue of said act of the legislature they are empowered to make for the regulation of the railroad business of your orator in South Dakota schedules of maximum passenger fares, not exceeding three (3) cents a mile, and of maximum rates of charge for the transportation of freight upon the lines of your orator in South Dakota.

Your orator further shows that on or about the 7th day of August, 1897, the said defendants, William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, as railroad commissioners of South Dakota, caused to be published

in the Sioux Falls Daily Press, a newspaper published at the City of Sioux Falls, Minnehaha County, South Dakota, and in the Lead Morning Call, a newspaper published in the City of Lead, Lawrence County, South Dakota, a notice to the railroad corporations doing business in the State of South Dakota, including your orator, stating that said Board of Railroad Commissioners would on the 23d day of August, 1897, at 10 oclock a. m. of said day at their office in the City of Sioux Falls, Minnehaha County, South Dakota, be in session for the purpose of hearing any person, firm or corporation, or common carrier who might desire to make any explanation or showing, or who might desire to furnish any information to said commissioners on the subject of determining and fixing maximum rates and classification of railroads and freight transported thereon. And in and by said notice said commissioners stated that they would be in session from day to day from said 23d day of August, 1897, to the 26th day of August, 1897, inclusive. And in and by said notice it was further stated that said railroad commissioners would on the 26th day of August, 1897, at their office in the City of Sioux Falls, Minnehaha County, South Dakota, finally fix and determine what the original maximum rate and fares and classification should be.

VII.

Your orator further alleges and shows that on said 23d day of August, 1897, the said Board of Railroad Commissioners of South Dakota did meet and assemble at their office in the said City of Sioux Falls, and remained in session from that date to and including the 26th day of August, 1897, and your orator and representatives of other railroad companies doing business in the State of South Dakota appeared before said board on the 23d day of August,

1897, and were present and in attendance at the meetings of said board upon each day during which said board was in session, from said 23d day of August, 1897, until the 26th day of August, 1897, and showed to said board by evidence duly submitted that the earnings of your orator in the State of South Dakota from all sources was largely less than an amount sufficient to pay its operating expenses and taxes in said State of South Dakota, and interest on its bonded debt on said lines in South Dakota, and further showed that any reduction of its rates of freight and fares would be a violation of your orator's rights, and would largely diminish its revenues in said State of South Dakota, and would work great and irreparable wrong and injury to your orator, and your orator then and there submitted full and complete facts and information as to its earnings, expenses and indebtedness, and requested said board to make any further examination or investigation that it desired to make as to the matters under inquiry before said Board of Railroad Commissioners.

And your orator further shows that no complaint was made during said session of said Board of Railroad Commissioners that the charges of your orator in the State of South Dakota for freight or fares were unjust or unreasonable, and that no proof of any kind was made, or offered to be made, by any person whomsoever in opposition to the testimony submitted by your orator before said board in relation to the matters above mentioned.

Your orator further shows that at said session of the Board of Railroad Commissioners of South Dakota your orator protested against any reduction of its said rates of freight and fares, and showed to said Board of Railroad Commissioners that any reduction thereof would be unjust, and would violate your orator's rights to have a fair and reasonable reward for its services as a common carrier in the State of South Dakota.

And your orator further shows that representatives of all the other railroad companies doing business in South Dakota, except the Illinois Central Railroad Company, appeared before said Board of Railroad Commissioners, and made similar showings from all which it conclusively appeared, and was not disputed, but under the rates charged by said companies for the transportation of passengers and freight, none of said railroad companies were earning sufficient revenue from the business in South Dakota to pay their operating expenses, taxes and interest, and leave any reward whatever to their stockholders for the service performed by said companies as common carriers in the State of South Dakota. But your orator shows that notwithstanding the showing made by your orator as above set forth, and in disregard of your orator's rights, the said defendants, William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, as railroad commissioners of the said State of South Dakota, did on the said 26th day of August, 1897, make a classification and fix and determine maximum rates for carriage of freight and maximum fares for the carriage of passengers in said State of South Dakota, whereby your orator's rates, earnings and revenues would be greatly diminished to the great wrong and injury of your orator.

VIII.

Further complaining your orator shows that the said classification of railroads and the schedule of maximum rates for the carriage of freights, and maximum fares for the carriage of passengers in the State of South Dakota, so made as aforesaid, and by said Board of Railroad Commissioners on the 26th day of August, 1897, was made and adopted by said Board of Railroad Commissioners in and by certain resolutions passed by said board, a copy of which resolutions is hereunto attached, marked Exhibit "A." That in and by said resolutions your

orator's railroad in the State of South Dakota was put into a class called Class "A", in which said Class "A" were also included the Sioux City and Northern Railroad, the Burlington, Cedar Rapids and Northern Railroad, the Chicago, St. Paul, Minneapolis and Omaha Railroad, and the Wilmar and Sioux Falls Railroad, and the other railroads in the State of South Dakota were included in three (3) other classes, known respectively as Class "B", Class "C" and Class "D".

And your orator further shows that in and by said resolutions so fixing and establishing a schedule of maximum freight rates and passenger fares for railroad companies doing business in the State of South Dakota, a certain schedule was adopted, fixed and determined for all Class "A" railroads, and that the rates of freight and fares for all railroads in South Dakota which were put into Class "B", Class "C" and Class "D", were fixed at a certain proportion of the rates so fixed and determined for the railroads embraced in Class "A". A copy of the schedule of maximum rates of charges for the transportation of freights by Class "A" railroads in the State of South Dakota, so fixed and established as aforesaid, is hereunto attached, marked Exhibit "B".

Your orator further shows that the maximum rate per mile for the transportation of any person with ordinary baggage not exceeding one hundred and fifty (150) pounds upon each and all the standard gauge railroads in the State of South Dakota, was by the said resolutions of the Board of Railroad Commissioners fixed at three (3) cents per mile between points within the State of South Dakota.

And your orator further shows that your orator's railroad is a standard guage road.

IX.

Further complaining your orator shows that in and by said resolution so adopted as aforesaid by said Board of Railroad Commissioners the said schedules of maximum freight and passenger rates are to go into effect on the 15th day of September, 1897, and unless restrained by this honorable court the said defendants, William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, as railroad commissioners of said State of South Dakota, will on that day consider, assume and regard said schedules of maximum freight and passenger rates as binding and obligatory on your orator, and said Board of Railroad Commissioners and said attorney general will endeavor to enforce the same and to compel your orator to conform thereto. But your orator alleges and shows that the said schedule of maximum freight and passenger rates so fixed and determined by said Board of Railroad Cammissioners are unjust and unreasonable, and not remunerative, and would not afford to your orator any fair or reasonable compensation for its service as a common carrier in the State of South Dakota.

And your orator further alleges and shows that its present schedule of rates for the carriage of passengers and freight in the State of South Dakota are neither unjust nor unreasonable to the public, but on the contrary thereof do not afford to your orator a just or fair reward for its services in that behalf. And your orator had hoped that the said Board of Railroad Commissioners in consideration of the premises, and of the facts and information submitted to and well known by them, would refrain from wronging and injuring your orator by reducing its earnings and revenue in the State of South Dakota. But your orator shows that the said schedule of maximum freight rates, so fixed and determined by said Board of Railroad Commissioners for your orator's railroad in South Dakota

proposes to reduce, and if put into effect will reduce, your orator's rates for the carriage of freight in South Dakota upon each and every class, article and commodity. That such proposed reduction amounts to from twenty (20%) to thirty-three and one-third (33⅓%) per cent. upon flaxseed, lumber and all articles known as Class "E" freight, and upon all other articles whatsoever said proposed reduction amounts to twenty (20%) per cent. from the rates now and heretofore in effect upon your orator's said railroad.

And your orator further shows that said schedule of maximum freight charges so fixed and determined by said Board of Railroad Commissioners, as above set forth, will, if enforced against your orator, reduce your orator's earnings from its said railroad in the said State of South Dakota more than twenty (20%) per centum of what such earnings now are and heretofore have been from the carriage of freight in said state, and that said schedule of maximum passenger charges of three (3c) per mile, will, if enforced against your orator, reduce your orator's revenue from the carriage of passengers upon its said railroad in the State of South Dakota by not less than twenty-five (25%) per centum of what such rate now is and and heretofore has been from the local carriage of passengers one way in said state.

X.

Your orator further shows that its net earnings from all sources in the State of South Dakota for six years last past have been as follows:

For the year ending June 30,	1892....	$ 566,430 74
" " " " " "	1893....	1,003,656 45
" " " " " "	1894....	594,669 41
" " " " " "	1895....	260,249 04
" " " " " "	1896....	328,406 52
" " " " " "	1897....	493,815 94

And your orator shows that its said lines of railroad in the State of South Dakota have at all times been honestly and economically operated, but that its gross revenue from the operation of its said lines of railroad in South Dakota, derived from passengers, freight, express, mail and all other sources of revenue, is not now, and never has been sufficient to pay the operating expenses of said lines of railroad in South Dakota, together with taxes and fixed charges applicable to said lines.

And your orator shows that the earnings in the State of South Dakota from all sources for the six fiscal years, beginning with the year ending June 30, 1892, and ending with the year ending June 30, 1897, amount to ten million, six hundred fifty-eight thousand one hundred seventy-five dollars and sixty-five cents ($10,658,175.65); that the operating expenses, including taxes, for the same period, were seven million, four hundred ten thousand nine hundred forty-seven dollars and fifty-five cents ($7,410,947.55), and that the interest properly chargeable upon the bonded indebtedness applicable to said lines in South Dakota, and paid for the same time by your orator, amounts to eight million, one hundred forty-five thousand three hundred ninety-four dollars and ninety-four cents ($8,145,394.94), leaving a deficit after payment of operating expenses, taxes and interest, amounting to four million, eight hundred ninety-eight thousand one hundred sixty-six dollars and eighty-four cents ($4,898,166.84), or an average annual deficit of more than eight hundred thousand dollars ($800,000.00).

And your orator further alleges and shows that it is not possible to state definitely what the results of the future operation of its said lines in South Dakota will be, if it is permitted to continue in effect its existing rates of charge for the carriage of passengers and freight. But that if it is compelled to

adopt and put into effect the said schedule of freights and fares so fixed and determined by said Board of Railroad Commissioners, or if it is compelled to make any reduction of its existing charges for the carriage of freight and passengers, its revenues will be impaired and reduced, and its right to receive just and adequate compensation for service performed will be to that extent impaired and violated.

XI.

Further complaining your orator alleges that its rate of fare for carrying passengers in South Dakota is four (4c) cents per mile on single trips, and has been four (4c) cents per mile during all the time that your orator has operated said lines in South Dakota; that said rate is just and reasonable, and even if it were more than four (4c) cents per mile, it would not be unjust or unreasonable to the traveling public; that the earnings of your orator from passenger business, both local and inter-state, in South Dakota for the six (6) years ending June 30, 1897, were two million, five hundred ninety-five thousand, two hundred fifteen dollars and thirty-four cents ($2,595,215.34), of which sum about one million, five hundred fifty-four thousand, nine hundred sixty-two dollars and twenty-five cents ($1,554,962.25) was from local passenger business, and one million, forty thousand, two hundred fifty-three dollars and nine cents ($1,040,253.09) was from inter-state traffic.

Your orator further shows that said rate of four (4c) cents per mile for single trip passenger fares is not unreasonable, and is not even fairly compensatory. And your orator's entire earnings from passenger traffic of every kind in the State of South Dakota is not, and has never been sufficient to pay the actual expenses of carrying on said passenger business.

And your orator shows that the reduction in passenger fares

proposed by such schedule, so fixed and determined by the Board of Railroad Commissioners of the State of South Dakota, would work a great wrong and hardship upon your orator, and would depreciate its revenue, and would compel it to perform services without any reasonable or adequate compensation therefor.

Your orator shows that a portion of the passenger earnings above set forth, were derived from the sale of one (1) way local tickets, and another portion from the sale of excursion and round-trip tickets, and another portion from the sale of mileage tickets, aggregating rides of one thousand miles (1,000), and two thousand (2,000) miles, respectively. That said mileage tickets covering one thousand (1,000) miles of travel are sold at two and one-half ($2\frac{1}{2}$) cents a mile, and said mileage tickets covering two thousand miles (2,000) of travel are sold at two (2) cents a mile, and that of said entire earnings from the carrying of passengers above set forth, about forty (40%) per centum are derived from the sale of single one-way tickets between points in the State of South Dakota.

And your orator further shows that said mileage tickets are sold to accommodate the travelling public, and particularly those who are engaged in business which requires a large amount of travel in conducting it, and said round trip tickets are sold at three (3c) cents a mile, and excursion tickets are sold at varying rates, of less than four (4c) cents a mile, and are so sold to accommodate the public on occasions when large numbers of people desire to attend meetings, conventions, fairs, exhibitions, or other large gatherings of people.

Your orator further shows that there is no reason to believe that the volume of local or inter-state passenger business would be appreciably increased, if the said reduction from four (4c) cents a mile to three (3c) cents a mile on local passenger rates were made, and that the result of such reduction would be

practically a diminution of your orator's revenues from local passenger business, in South Dakota, of twenty-five (25%) per centum, and a large reduction in its revenues on inter-state business, originating or terminating in South Dakota.

XII.

Further complaining, your orator shows that all of said reductions in said schedule, so fixed and determined by said Board of Railroad Commissioners, as aforesaid, both upon freight rates and passenger fares, are unjust, unfair and unreasonable; that they would add largely to the deficit now annually accruing in the conduct of your orator's business as a common carrier in the State of South Dakota; that your orator's charges for the transportation of passengers and freight in the other states through which its lines extend, and upon its inter-state traffic, are just and reasonable, and that if a corresponding reduction, or even a much smaller reduction, should be made in your orator's rates on its local business in other states, and upon its inter-state traffic, its earnings would be reduced below a sum sufficient to pay its operating expenses and taxes, and to maintain its said lines of railroad and defray its fixed charges, and that no reward or profit whatever would be left to your orator as compensation for its services as a common carrier upon its system of railroads.

XIII.

Further complaining your orator shows, that under and by virtue of the said act of the legislature herein above mentioned, it is provided that when any schedule of maximum rates for the carriage of passengers and freights shall have been made, or revised, as provided in said act, it shall be the duty of said Board of Railroad Commissioners to cause notice thereof to be

published for two (2) successive weeks in two (2) public newspapers, published one (1) in the County of Minnehaha, and one (1) in the County of Lawrence, in said State of South Dakota, which notice shall state the date of the taking effect of said schedule. And in and by said act it was provided that said schedule shall take effect at the time so stated in said notice.

And your orator further shows that said Board of Railroad Commissioners have prepared a notice, in pursuance of a provision of said act for publishing said notice in the said Sioux Falls Daily Press, which is a public newspaper, published in the County of Minnehaha, by the said defendant, the Press Publishing Company, and the said Board of Railroad Commissioners propose and intend to, and if not restrained by this honorable court will, publish said notice in another issue, or issues, of said Sioux Falls Daily Press, and propose and intend to publish said notice, and unless restrained by this honorable court, will publish it in the said Lead Morning Call, which is a public newspaper published in the County of Lawrence, in said State of South Dakota, by the said defendant, the Lead Printing Company, and if the said notice is permitted to be published in said last mentioned paper, or if its publication is permitted to be continued in said first mentioned paper for two (2) successive weeks, the said Board of Railroad Commissioners, and the said attorney general, will claim and insist that the said schedule of maximum freight and passenger rates, so fixed and determined, as aforesaid, have become binding and obligatory upon your orator. And thereupon the said Board of Railroad Commissioners, and the said attorney general, will attempt to enforce said schedule, and to compel your orator to adopt and conform to the same, and will unless restrained by this honorable court, for the purpose of enforcing said schedule, so fixed and determined, institute proceedings against your

orator and its officers and agents, and apply for writs of mandamus and injunction, and for attachments and other proceedings, and will institute criminal and penal suits for the fines and penalties in said act prescribed, including a forfeiture of your orator's charter and privileges. And your orator further shows that all the said proposed acts and doings of the said defendants are unlawful, unwarranted and contrary to equity and good conscience. That if said defendants, William H. Tompkins, W. T. LaFolette and Alexander Kirkpatrick, railroad commissioners of the State of South Dakota, and said defendant, Melvin Grigsby, as attorney general of said State of South Dakota, are not restrained and enjoined by order of this honorable court, your orator will be subjected to and compelled to defend a multitude of said actions and proceedings, both civil and criminal, instituted by said defendants for the purpose of enforcing said schedule and classification against your orator, as well as numerous actions and proceedings which will be brought against it by private individuals, for damages, penalties and other relief, for the enforcement of said schedule and classification. And your orator alleges that such multiplicity of suits and proceedings would greatly embarrass and oppress your orator, and expose it to grave perils, and subject it to the severest hardships, contrary to equity and good conscience, and violative of its rights under the Constitution and laws of the United States and of the State of South Dakota.

XIV.

Further complaining, your orator alleges that the enforcement of said schedule of maximum rates and charges for the carriage of passengers and freight, so fixed and determined by said Board of Railroad Commissioners as aforesaid, would impair the obligation of contracts, in violation of article one

(1), section ten (10) of the Constitution of the United States, and deprive your orator of its property, without due process of law, and deny to your orator the equal protection of the laws, in violation of article fourteen (14) of the Amendments to the Constitution of the United States, and will in divers and numerous other respects, be unjust and unlawful. And your orator alleges that neither the said Board of Railroad Commissioners, nor the said legislature of the State of South Dakota, has any power or lawful authority to compel your orator to perform services without just and reasonable compensation.

And your orator further shows that it is without adequate remedy at law and can only have relief in a court of equity, where matters of this sort are properly cognizable and relievable, and that the matters in controversy in this suit exceed the sum of two thousand dollars ($2,000), exclusive of interest and costs.

In consideration whereof and for as much as your orator is remediless in the premises at and by the strict rules of the common law, and is only relievable in a court of equity where matters of this kind are properly cognizable and relievable, your orator prays:

1. That the said defendants, William H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, as railroad commissioners of the State of South Dakota, their agents and servants, be enjoined and restrained from further publishing in any public newspaper of the State of South Dakota, the said notice of the fixing and determining of said maximum rates of freight and fares and of the date when the same will go into effect; and that they be further enjoined and restrained from enforcing said schedule so fixed and determined, as aforesaid, or attempting to enforce the same and from interfering in any manner with your orator in charging and collecting the present

rates of fare and freight in force upon your orator's lines in said State of South Dakota.

And your orator further prays that said defendant Melvin Grigsby, as attorney general of the State of South Dakota, be enjoined and restrained from bringing any suits or actions to enforce said schedule of maximum rates or to collect or impose any penalties or forfeitures upon your orator for not conforming to and observing said schedule; and that the defendants, the Press Publishing Company and the Call Printing Company be enjoined and restrained from publishing or continuing to publish, or complete the publication of the said notice by the said Board of Railroad Commissioners of the fixing and determining of said schedule of maximum rates of freights and fare, and of the date when the same would go into effect.

And may it please your Honors to grant unto your orator a writ of subpœna of the United States of America, issuing out of and under the seal of this honorable court, directed to the said William H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, as railroad commissioners of the State of South Dakota; Melvin Grigsby, as attorney general of the State of South Dakota; The Press Publishing Company and The Call Printing Company, the defendants herein, and thereby commanding them on a certain day therein to be named, and under a certain penalty, to be and appear before this honorable court, and then and there to answer, but not under oath—such oath being expressly waived—all and singular, the premises, and to stand to, perform, and abide by such order, direction and decree as may be made against them in the premises, and as shall seem to your Honors to be meet and agreeable to equity and good conscience.

That a temporary injunction may issue against the said defendants, the said Press Publishing Company and the said Call Printing Company, commanding them and each of them, their

agents, servants and employes, and all persons claiming to act by, through or under them, or either of them, from publishing, or continuing the publication in said newspapers, or either of them, of the said notice of the said Board of Railway Commissioners of South Dakota hereinabove set forth; and that upon the hearing of this cause and entry of a decree herein said temporary injunction may be made perpetual.

May it please your Honors to grant unto your orator a writ of injunction, issuing out of your honorable court, or issued by one of your Honors, according to the ordinary course and practice of this court in such case made and provided, directing, commanding, enjoining and restraining the said defendants, William H. Tompkins, W. T. Lafollette and Alexander Kirkpatrick, as railroad commissioners of the State of South Dakota, their servants, agents and all persons claiming to act for, through or under them, and all persons whomsoever, from publishing or continuing the publication of such notice in said newspapers, or in any newspapers in the State of South Dakota, and from allowing or permitting the same to be further published, or the publication thereof continued, and from putting into effect, or claiming to put into effect, said schedule of maximum passenger and freight rates, and from enforcing or attempting to enforce said schedules, and from interfering in any manner with your orator in carrying on its business in the State of South Dakota, at the rates for the carriage of passengers and freight now in effect and operation upon its lines of railroad in the State of South Dakota; and, further, enjoining and restraining the said Melvin Grigsby, as attorney general of the said State of South Dakota, from enforcing or attempting to enforce said schedule and from instituting or prosecuting any suit or suits to enforce the same, or to collect the penalties or impose forfeitures upon your orator for failing to adopt and conform to said schedule; and further enjoining

and restraining said defendants, The Press Publishing Company and The Call Printing Company, and each of them respectively, from publishing or continuing the publication of said notice of said Board of Railroad Commissioners of the fixing and determining of said schedule of maximum passenger and freight rates and of the date of the taking effect thereof.

And your orator prays that until said temporary injunction shall issue, your Honors will issue a temporary restraining order against said defendants, and each of them, in the form and to the effect above prayed.

And may it please your Honors to grant unto your orator such other and further relief as the circumstances of the case require and to this honorable court shall seem meet, and your orator, as in duty bound, will ever pray.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY.

By A. C. BIRD,
Its General Traffic Manager.

A. B. KITTREDGE,
Solicitor for Complainant.

GEORGE R. PECK,
Of Counsel.

State of South Dakota, }
County of Minnehaha } ss.

A. C. Bird, being first duly sworn, says: That he is general traffic manager of the Chicago, Milwaukee and St. Paul Railway Company, the complainant herein, and as such general traffic manager has charge of all the traffic operations of the said company, both passenger and freight; that he has read the foregoing bill of complaint and knows the contents thereof, and that the same is true of his own knowledge, ex-

cept as to those matters therein stated upon information and belief, and as to those matters, he believes it to be true.

A. C. BIRD.

Subscribed and sworn to before me this 27th day of August, A. D. 1897.

FRANK R. SIDWELL,

(Seal.) Notary Public, Minnehaha County, South Dakota.

OFFICE OF STATE BOARD OF RAILROAD COMMISSIONERS.

Sioux Falls, South Dakota, August 26th, 1897.

Be it resolved: That the railroads doing business in this state are for the transportation of freight, hereby denominated, and classified as follows:

CLASS A.

Sioux City & Northern Railroad.
Burlington, Cedar Rapids & Northern Railroad.
Chicago, Milwaukee & St. Paul Railroad.
Chicago, St. Paul, Minneapolis & Omaha Railroad.
Wilmar & Sioux Falls Railroad.

CLASS B.

Dubuque & Sioux City Railroad.
Wisconsin, Minnesota & Pacific Railroad.
Chicago & North-Western Railroad.
Duluth, Watertown & Pacific Railroad.
Great Northern Railroad.

CLASS C.

Fremont, Elkhorn & Missouri Valley Railroad.

CLASS D.

Chicago, Burlington & Quincy Railroad.

That the classification of freight this day adopted shall apply to all railroads doing business in this state regardless of its class.

Resolved, That the schedule of maximum freight rates this day adopted for the transportation of freights within this state shall apply to all Class "A" railroads. That the maximum rates on all Class "B" railroads is hereby fixed at a rate twenty-five (25%) per cent. higher than the rates for Class "A" railroads.

That the maximum rates on all Class "C" railroads is hereby fixed at a rate forty (40%) per cent. higher than the rates hereby fixed for Class "A" railroads.

That the maximum rates on all Class "D" railroads is hereby fixed at a rate fifty (50%) per cent. higher than the rate hereby fixed for Class "A" railroads.

Resolved: That the maximum rates for the transportation of freight within this state, and shipped from any point within this state to any point in this state, whether the transportation of the same shall be wholly in this state, or partly within this state and an adjoining state or states, shall be as follows:

Be it further resolved: That the following shall be, and the same is hereby adopted as the South Dakota classification of all freights transported upon any of the railroads within this state, which are classified as above expressed.

Western classification with amendments inserted here, and as appear on pages 31 to 33, inclusive, of our classification record.

Be it further resolved: That the maximum rate per mile

for the transportation of any person, with ordinary baggage, not exceeding 150 pounds, shall be three (3) cents per mile between points within this state, upon all of the lines of standard gauge railroads in this state.

And that the maximum rate per mile for the transportation of any person, with ordinary baggage, not exceeding 150 pounds, shall be five (5) cents per mile between points within this state upon all narrow gauge railroads within this state.

Resolved: That the above schedule of reasonable maximum rates of charges for the transportation of passengers, freight and cars, of each of the railroads above classified, and doing business in the State of South Dakota, together with the classification of freights, be and the same is hereby adopted by said Board of Railroad Commissioners, in accordance with the laws of the State of South Dakota, and the classification of freight, and maximum rates herein fixed for the transportation of all freight and passengers upon the lines of railroads by these resolutions enumerated, are hereby declared to be the reasonable maximum rates required by law to be by us fixed and established, and shall go into effect on the 15th day of September, A. D. 1897.

And all the railroads herein classified are hereby directed to adjust all existing rates to this schedule of maximum rates, and this classification for the transportation of passengers and freight, within this state, and put the same into operation and effect on and after September 15, 1897.

And the operation of the above schedule and classification is hereby intended and ordered to apply to all bridges and ferries used and operated in connection with any railroad, and also to all railroads leased by any corporation, receiver, trustee or other person operating a railroad, whether owned or operated under contract, agreement, lease or otherwise, or which may

hereafter be purchased, leased, acquired or operated within the State of South Dakota by any railroad.

Office of the Board of Railroad Commissioners,
Sioux Falls, South Dakota, August 26, 1897.

I hereby certify that above and foregoing are a true and correct copy of the resolutions adopted by the Board of Railroad Commissioners on the day and date above written, the copy of the schedule of reasonable maximum rates, and copy of amendments to classification, are true and correct copies also adopted on the same day, as shown from the records of this office.

Copy of maximum rates and copy of amendments to classification hereto attached.

Attest, correct: W. H. TOMPKINS,
H. W. SAWYER, Chairman.
Secretary.

IN THE CIRCUIT COURT OF THE UNITED STATES, DISTRICT OF SOUTH DAKOTA, SOUTHERN DIVISION.

The Chicago, Milwaukee and St. Paul Railway Company, Complainant,
vs.
William H. Tompkins et al., Defendants.
} In Equity.

To the Honorable, the Judges of the Circuit Court of the United States, for the District of South Dakota, sitting in equity.

The defendant, Melvin Grigsby, as attorney general of the State of South Dakota, for his separate answer to the bill of complaint of the Chicago, Milwaukee and St. Paul Railway Company, herein:

I.

Admits the allegations of the paragraphs of said bill numbered, "I.", "II.", "III.", "IV.", "VI." and "VIII.".

II.

Denies each and every allegation contained in the paragraphs of said bill of complaint numbered, "V.", "VII.", "IX.", "X.", "XI.", "XII.", "XIII.", and "XIV."

MELVIN GRIGSBY,
Attorney General, South Dakota.

State of South Dakota, } ss.
County of Minnehaha. }

Melvin Grigsby, being first duly sworn, deposes and says, that he is the duly elected, qualified and acting attorney general of the State of South Dakota, that he has read the foregoing pleading by himself subscribed and knows the contents thereof; that the same is true of his own knowledge, except as to those matters therein stated on information and belief, and as to those matters he believes it to be true.

MELVIN GRIGSBY.

Subscribed and sworn to before me this 7th day of September, 1897.

OLIVER S. PENDAR,
Clerk

(Official Seal.)

(Endorsed.) No. 286.—U. S. Circuit Court—District of South Dakota—Southern Division—Chicago, Milwaukee and St. Paul Railway Co., complainant, v. William H. Tompkins et al., defendant. Separate answer of Melvin Grigsby, filed September 7th, 1897. Oliver S. Pendar, Clerk.

United States of America, }
Eight Judicial Circuit, } ss.
District of South Dakota. }

I, Oliver S. Pendar, clerk of the Circuit Court of the United States of America, in and for the District of South Dakota, do hereby certify, that I have carefully compared the foregoing copy with the original hereof which is in my custody as such clerk and that such copy is a correct transcript from such original

In testimony whereof, I have hereunto set may hand and affixed the seal of said court at Sioux Falls, in the said district, this 10th day of September, A. D., 1897.

OLIVER S. PENDAR,

(Seal.) Clerk.

By.....

Deputy.

IN THE CIRCUIT COURT OF THE UNITED STATES, WITHIN AND FOR THE DISTRICT OF SOUTH DAKOTA, SOUTHERN DIVISION.

The Chicago, Milwaukee & St. Paul Railway Company, Complainant,

v.

William H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, attorney general of said state.

To the Honorable Judges of the Circuit Court of the United States, in and for the District of South Dakota:

Now the defendants, William H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, and answering the bill of complaint, in this action, as alleged and shown to the court:

That the complainant is a corporation, and the owner and proprietor of the several lines of railways in the several states, as alleged in its said bill of complaint.

That the defendants are, and since the first day of January, 1897, have been the duly elected, qualified and acting railroad commissioners of the State of South Dakota.

That heretofore and about the year 1897, all that territory now included in the boundaries of the State of South Dakota was included in and formed a part of the then Territory of Dakota, and was at that time an undeveloped and largely uninhabited territory, and was not traversed by any lines of railway.

That about the year 1879, the complainant and the Chicago and North-Western Railway Companies were the owners and operators of competitive lines of railway running westerly and north-westerly from the City of Chicago, and traversing the States of Illinois, Wisconsin, Minnesota and Iowa, and about that time each of said railways by way of extensions of lines owned by them in the States of Iowa and Minnesota, into the then undeveloped and largely uninhabited Territory of Dakota, and continued to construct such lines during the years of 1880, 1881, 1882 and 1883.

That during such construction, and principally during the first years thereof, the complainant constructed about all of the railway now owned and operated by it in the State of South Dakota.

That at the time of the construction of said lines of railway and at the points to which, and in the territory through which they were constructed, there was no people, business or industry to be accommodated or served by the construction of said lines of railway, neither was there any known deposit of iron, coal or other mineral to be developed by the construction of said lines of railway, but that said territory was a broad prairie, devoid of timber, with the possibilities of being at some time settled up and developed only as an agricultural district.

That said lines of railway constructed by the complainant, not in response to any then existing demand or need for the

same, but for the pupose of preempting and occupying said territory and in anticipation of the future settlement and development of the same.

That at the time of the construction of said lines of railway there was, and for several years prior thereto had been, an unprecedented tide of immigration to the unsettled portions of the north-western states and territories, and the complainant and other railway companies similarly situated were making large profits by the construction of railway lines into new and unsettled territory, and acquiring sites for and establishing and laying out towns and cities along such lines of railway, and by carrying into such new territory the said emigration and materials and supplies used and needed in the construction of such towns and cities, and the necessary farm buildings as well as cattle, horses, tools, machinery, food and other supplies needed and used in the rapid occupation of a new territory by an agricultural people.

That the excitement and speculation occasioned by such rapid settlement, and the large profits realized by such railway companies, in so opening up a new territory, caused great rivalry between the complainant and its said competitor, the Chicago and North-Western Railway Company, in the occupation of the then territory of Dakota, resulting in the construction by said companies of needless and parallel lines of railway in the said Territory of Dakota, now the State of South Dakota.

That the emigration into the portion of the territory occupied by complainant's line of railway, practically ceased in 1884, and the resultant immigration then began, continuing for several years to such an extent, that large portions of the said territory became almost depopulated, and that in some instances the population in certain voting precincts was re-

duced from ninety votes in 1883 and 1884, to four votes in 1892.

Towns were almost abandoned, and in some instances the complainant, and other lines of railway, closed up and abandoned certain stations on their lines of railway in the State of South Dakota.

And these defendants further allege, that in the construction of complainant's lines of railway in South Dakota, the said complainant secured its right of way, depot and terminal grounds in advance of the settlement of the territory and secured the same from the government at a nominal cost.

That the said lines of railway were constructed through a comparatively level prairie country, and not across any large streams or other places or obstacles requiring any large or expensive bridges, grades, or trestles, or tunnels, but that all of said lines are of very simple and inexpensive construction, and these defendants allege upon information and belief, that the construction of complainant's lines of railway, in the State of South Dakota, including right of way, terminal and depot grounds and town sites, did not cost to exceed $6,000 per mile.

That in its capitalization of its Dakota lines of railway the complainant did not restrict itself to the cost of construction and equipment, but capitalized the same upon the basis of the large earnings of its said lines during the phenomenal emigration period and as defendants are informed, and believe, at least $10,000 per mile in excess of the cost of construction and equipment of the same.

And these defendants further allege that the complainant has been improvident in the issue of bonds, and preferred or guaranteed stock in obligating itself to pay exhorbitant rates of interest and dividends to that extent that the rates of inter-

est and dividends agreed to be paid are so much that said bonds are now sold upon the markets of the world at $136 per $100 of bond, and said preferred or guaranteed stock is now sold upon the markets of the world at $163 per $100 of stock.

The complainant having sold and disposed of said bonds and stock for less than the par value thereof, and not securing to itself the benefit of the full value thereof, and these defendants further allege, that the complainant has been improvident in the investment of portions of its capital, to wit: about the sum of $20,000,000 in stock and bonds of other corporations and railway companies, large portions of which are non-paying and unprofitable.

These defendants, further answering, allege and show to the court, that heretofore, and at all times since the construction of complainant's said railway in South Dakota, there have been no restrictions upon or legal regulations of the rates or charges for the transportation of freight and passengers upon complainant's said railway in South Dakota, but said complainant has at all times heretofore fixed its own rates or charges for the transportation of freight and passengers over its lines of railway in South Dakota.

That complainant has at all times heretofore charged a maximum rate of four cents per mile for the transportation of passengers over its said lines of Railway in South Dakota, and these defendants allege that said rates are exorbitant, unjust and unreasonable, and at least twenty-five per cent. higher than is charged by complainant for the transportation of passengers over its lines of railway in other states, and is much higher than is charged by other railroad companies for the transportation of passengers in other north-western states, and these defendants deny that three cents per mile as a maximum rate for the transportion of passengers over complainant's lines of railway in South Dakota is unreasonable or unjust, but these de-

fendants allege that said maximum rate of three cents per mile will fully and fairly afford a reasonable and just compensation for the carrying of passengers over complainant's lines of railway in South Dakota.

These defendants deny that the gross earnings of complainant from passenger service in South Dakota for the last five years has not been sufficient to pay the operating expenses of its passenger business in South Dakota, exclusive of taxes, interest on bonds and dividend on stock.

And defendants deny that the earnings of complainant from passenger service are correctly stated or exhibited by complainant in its bill of complaint filed in this action.

And deny that the operating expenses of complainant in its passenger service in South Dakota are truly and correctly stated or exhibited by complainant in its bill of complaint filed in this action, and allege that said expense is not nearly so great as stated therein.

And these defendants allege that the amount stated by complainant as the amount of its earnings from passenger service in South Dakota for the years, 1892, 1893, 1894, 1895, 1896 and 1897 is not the true and correct amount of said earnings, but these defendants are informed and believe said figures are arrived at by certain rules of apportionment of the earnings of complainant's entire system, and do not represent the actual facts.

That in many respects the methods employed by complainant in making said estimates are wholly unfair, and show said earnings to be much less than said earnings actually amount to.

And these defendants allege upon information and belief, that the complainant's said passenger earnings are at least fifty per cent. greater than stated or exhibited by complainant in its bill of complaint filed in this action.

And the complainant has at all times earned a profit on its passenger business in South Dakota, over and above the operating expenses in that department.

And these defendants further allege that a maximum rate of three cents per mile for the transportation of passengers is greater than the average rate now charged by complainant for the transportation of passengers in South Dakota, such average being two and nine-tenths cents per mile.

And these defendants deny that the reduction of the maximum rate from four to three cents per mile will in any way affect the rates of charges for excursion, commutation or mileage tickets, but allege that the reduction of the maximum rate will increase the sale of maximum rate tickets as against the present sale of maximum tickets in proportion of the same to the sale of commutation and mileage tickets, resulting not in a reduction of the passenger earnings, but only in a greater uniformity of charges for passenger service.

These defendants further answering, deny that the gross earnings of complainant from freight service in the State of South Dakota for the years 1892, 1893, 1894, 1895, 1896 and 1897, are truly and correctly stated, or exhibited by complainant in its bill of complaint in this action, but these defendants allege that the figures and amounts so stated have been arrived at by certain rules of apportionment of the earnings of complainant's entire system, and do not represent the actual facts, that in any respects the methods employed are wholly unfair and show said earnings to be much less than said earnings actually amount to.

And these defendants allege, upon information and belief, that said freight earnings, if correctly estimated, and the South Dakota lines credited with the earnings equitably earned by them, that the amount of such earnings would be at least sev-

enty per cent. greater than stated or exhibited by complainant in its bill of complaint in this action.

And these defendants, further answering allege, that the rates charged by complainant for the transportation of freight in South Dakota are extortionate and unreasonably high, in many instances so high as to prohibit the shipment of ordinary products.

The said rates are much greater than is charged by complainant and other railway companies for similar service upon its lines of railway in other and adjoining states (and on its inter-state South Dakota business), being about ninety per cent. higher than the rates charged in the State of Iowa for similar service.

And these defendants deny that the operating expenses of complainant in its freight department of South Dakota are truly or correctly stated or exhibited in its bill of complaint in this action, but said amounts are arrived at by estimates according to certain rules of apportionment, and that the actual amount is much less than so stated and exhibited.

And these defendants further allege, that the complainant from its capital invested large sums of money in stocks, bonds and properties, other than its line of railway, such investments amounting to about $20,000,000, or about one-third of its entire capitalization, from which it annually derives certain interest, dividends and profits, amounting to the sum of $500,000, no part of which has been apportioned to the earnings of its Dakota lines in estimates given in complainant's bill of complaint.

These defendants further allege, that complainant's lines of railway in South Dakota are chiefly valuable to complainant as a part of complainant's great railway system, being all terminal lines, and gathering, supplying and receiving large vol-

umes of business carried by complainant over its main lines in other states.

That said Dakota lines are of a much greater earning value to complainant than the mere prorate mileage of business carried on the lines in the State of South Dakota would indicate, and that in the estimated earnings of Dakota lines stated and exhibited in complainant's bill of complaint, no account is taken of or allowance made for the value to complainant for long haul business afforded its other lines by its Dakota lines, and that if such account or allowance was taken or made as a part of complainant's compensation for the operation of its Dakota lines, such compensation would be found to be very much greater than stated or exhibited by complainant in its bill of complaint.

Defendants answering further allege that the complainant's lines of railway in South Dakota are not more valuable now than when first constructed, and that for the purposes of taxation, said lines of railway have been valued at from $2,000 per mile on branch lines to $4,000 per mile on its main lines, and that said valuation is a fair valuation of the cash value of said railway lines, and much greater than complainant is willing to concede for the purpose of taxation.

And these defendants further answering allege that if a schedule of maximum rates for the transportation of freight should be promulgated and enforced upon complainant's lines of railway on a basis of a reduction of twenty per cent. from the present rates charged by complainant, it would afford a full compensation for the service rendered, and would still be very much greater than the rates charged by complainant in other states, although such services in other states is fully as expensive to complainant and not any more valuable to the patrons.

That such reduction would greatly increase the volume of

business by making the movement of certain stock products and materials profitable, the movement of which is now precluded and impracticable by reason of the high and extortionate rates now charged by complainant on the lines of its railway in South Dakota.

Defendants further answering admit the publication of the notice of hearing as set out in complainant's bill of complaint and allege, that in pursuance of said notice, and the direction of the laws of the State of South Dakota, they did as a Board of Railroad Commissioners, assemble at their office in the City of Sioux Falls, South Dakota, on the 23d day of July, 1897, for the purposes named in said notice, and did then and there proceed to hear all interested parties, upon questions relating to the promulgation of a schedule of maximum freight and passenger rates for all lines of railway in the State of South Dakota.

That the complainant had actual notice of the time and place and purposes of said meeting, and by Mr. Bird, one of its principal officers, appeared before the said meeting of the board and objected to, and protested against any and all reduction of freight and passenger rates, but did not submit any facts, data, or evidence showing, or tending to show the unreasonableness of any such reduction.

That these defendants as such board continued in session from day to day, laboring dilligently, to secure the data and information necessary for them to act intelligently in making of a schedule of reasonable maximum rates, and were so engaged in session when on the 26th day of July, 1897, these defendants did promulgate, establish and publish the schedule of maximum rates as set out in the bill of complaint, for the transportation of freight and passengers.

And these defendents allege that said schedule of rates for

the transportation of freight and passengers, is a reasonable schedule of rates for such service by complainant, and will afford to complainant a fair and reasonable compensation for the transportation of freight and passengers, in the State of South Dakota.

Wherefore, defendants pray that the complainant's bill of complaint be dismissed and that the defendants be awarded their costs and damages.

T. H. NULL,
C. S. PALMER,
F. M. BROWN,
Solicitors for Defendants.

T. H. NULL,
C. S. PALMER,
F. M. BROWN,
Of Counsel.

(Endorsed.)

C., M. & St. P. Ry. Co., Answer. October.....1897. Filed Oct. 4, 1897. Oliver S. Pendar, clerk.

United States of America,
Eighth Judicial Circuit,
District of South Dakota. } ss.

I, Oliver S. Pendar, clerk of the Circuit Court of the United States of America, in for the District of South Dakota, do hereby certify, that I have carefully compared the foregoing copy with the original hereof, which is in my custody as such clerk, and that such copy is a correct transcript from such original.

In testimony whereof, I have hereunto set my hand and affixed the seal of said court, at Sioux Falls, in the said district, this 12th day of October, A. D. 1897.

OLIVER S. PENDAR,
Clerk.

(Seal.)

By G. H. STITES,
Deputy.

CIRCUIT COURT OF THE UNITED STATES, DISTRICT OF SOUTH DAKOTA, IN AND FOR THE SOUTHERN DIVISION THEREOF.

Chicago, Milwaukee and St. Paul Railway Company,
Complainant,
vs.
William H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, as railroad commissioners of the State of South Dakota et al.,
Defendants.

REPLICATION.

This repliant, the Chicago, Milwaukee and St. Paul Railway Company, saving and reserving to itself all and all manner of advantage of exception, which may be had and taken to the manifold errors, uncertainties and insufficiencies of the answer of said defendants, Tompkins, LaFollette and Kirkpatrick, for replication thereunto, saith that it doth and will aver, maintain and prove its said bill to be true, certain and sufficient in the law to be answered unto by the said defendants, and that the answer of the said defendants is very uncertain, evasive and insufficient in law to be replied unto by this repliant: without that, that any other matter or thing in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed or avoided, traversed or denied, is true; all of which matters and things this repliant is ready to aver, maintain and prove as this honorable court shall direct, and humbly prays as in and by its said bill it hath already prayed.

A. B. KITTREDGE,
Solicitor for Complainant.

GEO. R. PECK,
Of Counsel.

IN THE CIRCUIT COURT OF THE UNITED STATES, WITHIN AND FOR THE SOUTHERN DIVISION OF THE DISTRICT OF SOUTH DAKOTA.

The Chicago, Milwaukee and St. Paul Railway Company, Complainant, vs. Wm. H. Tompkins, W. T. La-Follette and Alexander Kirkpatrick, constituting the Board of Railway Commissioners of the State of South Dakota, et al., Defendants.	In Equity. No. 286.

At the request of the parties in the above entitled action that a special examiner be appointed to take and report the testimony therein;

It is ordered that L. W. Crofoot, of Aberdeen, South Dakota, be, and he is, hereby appointed in the above entitled action a special examiner to take the testimony of all witnesses examined therein and report the same to the court with all convenient speed.

And it is further ordered that said special examiner be, and he is, hereby authorized and empowered to take said testimony either within or without the District of South Dakota.

Dated Dec. 6th, 1897.

By the court:

JOHN E. CARLAND,
Judge.

(Endorsed:) No. 286. C., M. & St. P. R'y. Co. v. Wm. H. Tompkins et als. Order appointing L. W. Crofoot special examiner. Filed Dec. 6, 1897. Oliver S. Pendar, Clerk.

United States of America,
Eighth Judicial Circuit,
District of South Dakota. } ss.

I, Oliver S. Pendar, clerk of the Circuit Court of the United States of America, in and for the District of South Dakota, do hereby certify that I have carefully compared the foregoing copy with the original hereof, which is in my custody as such clerk, and that such copy is a correct transcript from such original.

In testimony whereof I have hereunto set my hand and affixed the seal of said court at Sioux Falls, in the said district, this 5th day of February, A. D. 1898.

OLIVER S. PENDAR,
Clerk.

(Seal.)

By G. H. STITES,
Deputy.

IN THE

Circuit Court of the United States,

FOR THE DISTRICT OF SOUTH DAKOTA,

IN AND FOR THE SOUTHERN DIVISION.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Complainant,
vs.
W. H. TOMPKINS, W. T. LaFOLLETTE and ALEXANDER KIRKPATRICK, constituting the Board of Railroad Commissioners of the State of South Dakota, and MELVIN GRIGSBY, Attorney General of said State,
Defendants.

Evidence taken before L. W. Crofoot, special examiner at the office of the Chicago, Milwaukee and St. Paul Railway Company in the City of Chicago, State of Illinois, on January 12, 1898, at 2 o'clock p. m., pursuant to agreement by the attorneys for both parties, the complainant appearing by George R. Peck, Esq., and A. B. Kittredge, Esq., and the defendants appearing by T. H. Null, Esq., and W. O. Temple, Esq., their respective solicitors.

W. N. D. WINNE, being called as a witness on behalf of the complainant was by the special examiner first duly sworn to testify to the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Winne, please state what official position if any, you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. I am the general auditor of the company.

The taking of the evidence was here adjourned by consent of counsel for both parties to Tuesday, January 18, 1898, at 2 o'clock p. m. at the same place.

Tuesday, January 18, 1898, 2 o'clock p. m.

The complainant appeared by George R. Peck, Esq., and A. B. Kittredge, Esq., solicitors and counsel for the complainant; and the defendants appeared by T. H. Null and W O. Temple, Esq., solicitors and counsel for the defendants.

Direct Examination of W. N. D. Winne continued by Mr. Peck.

Q. How long have you been general auditor of the defendant company, the Chicago, Milwaukee and St. Paul Railway Company? A. Since December, 1890.

Q. Before that date, had you been connected with the company, and if so, state in what capacity? A. I was assistant auditor of the company for eight years previous to December, 1890, and bookkeeper for several years before that; I do not remember the exact date.

Q. How many years in all have you been connected with the company? A. About thirty years.

Q. Are you acquainted with the location of the lines of the company? A. I am, sir.

Q. What are the duties of the position you hold with the company? A. Well, I have general charge of all of the accounts of the company.

Q. And you have had such charge during all of the time you have been general auditor? A. Yes, sir.

Q. Can you state about what the mileage of the St. Paul system is? A. It is about sixty-one hundred; I have some figures right here. The total main track owned is 6,142.64 miles and the main track owned jointly with other companies 11.19 miles. In addition to that, we own a large amount of second and third sidings and spur tracks.

Q. What is the mileage of the sidings and spur tracks? A. The tracks aside from the main track are 1,604.91 miles and the second tracks and side-tracks owned jointly are 46.02 miles, and also some tracks that are operated, by contract you know.

Q. The sidings, spurs and spur tracks and other tracks that you have mentioned in addition to the main track are made necessary for the operation of the system as a system, are they not? A. Yes, sir.

Q. Where are they located? I do not mean specifically, but in a general way? A. Well, of course they are spread over the entire system; I can not tell exactly how many miles there are in each state at present. I have the information, however.

Q. Now Mr. Winne, I will ask you to state through or into what states the mileage of the railroad of the plaintiff company extends? A. In the States of Illinois, Wisconsin, Iowa, Missouri, North Dakota, South Dakota, Minnesota and Michigan.

Q. Have you a map that shows with reasonable accuracy

the location of the railroad system of the Chicago, Milwaukee and St. Paul Railway Company, and if so, will you produce it? A. I have such a map and this is the one.

(Producing the same.)

Mr. Peck: I offer this map in evidence.

Which paper was hereupon marked Exhibit 1 by the special examiner, was received in evidence. (See map opposite.)

FOLDOUT(S) IS/ARE TOO LARGE TO BE FILMED

A. (Continued.) The statement here submitted shows the miles of main track 6,153.83, which comprises the main track owned solely by the company 6,142.64, miles, and main track owned jointly with other companies, 11.19 miles.

Q. Mr. Winne, a portion of the mileage of the Chicago, Milwaukee and St. Paul Railway Company is located in South Dakota, is it not? A. Yes, sir.

Q. Will you state the mileage of the company in the State of South Dakota? A. 1,101.06 miles of main track.

Q. State also, if you are able to, the amount of side and spur track and other tracks than the main tracks in South Dakota? A. The miles of tracks other than main tracks in the State of South Dakota, 91.46 miles.

Q. When was the Chicago, Milwaukee and St. Paul Railway Company organized? A. It was organized, I think it was in May, I think the 5th of May, 1863.

Q. Under what name was it then known? A. It was known as the Milwaukee and St. Paul Railway Company.

Q. And it has its present name by a change of names some time ago? A. The name was changed to Chicago, Milwaukee and St. Paul Railway Company in the early '70s; I do not remember exactly when.

Q. At the time of its organization in 1863, can you state what portion of the present system of railroad it owned? A. It owned a line of road from Portage City to La Crosse, that was all at first. After that it acquired a line from Portage City east to Milwaukee; it acquired a line from Brookfield Junction to Columbus, and my recollection is, built from Columbus to Portage City and from Milwaukee to Brookfield.

Q. Afterwards it acquired the Milwaukee and Prairie Du Chien line? A. Yes, sir.

Q. And other lines in Wisconsin? A. And other lines in Wisconsin.

Q. I will ask you to state whether it has either by construction or by purchase between that time and this, acquired its present system of road? A. It has.

Q. Mr. Winne, will you please state the capitalization of the company in bonds and stock? A. The capitalization of the company on the 30th day of June, 1897, which was the date of our last annual report, was as follows:

Preferred stock	$29,054,900
Common stock	46,026,600
Total	$75,081,500
Funded debt	$137,762,000
Total stock and debt	212,843,500

Q. State what the capitalization of the company amounts to upon the mileage based on the main line of the system as near as you are able? A. I have these figures from our official report, and they are arrived at by taking the main track owned by the company,—owned solely by the company—and one-half of the main track owned jointly with other companies and that gives the amount of the capital stock, both preferred, and common as $12,211.89 per mile of main track. The funded debt arrived at in the same way gives an average of $22,406.77 per mile, or a total capitalization of $34,618.66 per mile.

Q. Have you a list of the now existing mortgages of the company, and if so, will you produce them? A. I have such a list as a part of our official report.

Which list was here produced by the witness for examination of counsel, was marked Exhibit 3, by the special examiner, was offered and received in evidence.

Exhibit 3.

FUNDED DEBT, JUNE 30TH, 1897.

Description of Bonds.	Date of Issue.	When Due.	Rate of Interest.	Interest Payable.	Amount of Bonds Outstanding.	Interest. Accrued during the Year	Interest. Paid During the year.
Iowa & Minnesota Division	1867	1897	7 per cent.	Jan. and July.	162,000 00	11,340 00	7,035 00
Prairie du Chien Division, 1st Mortgage	1867	1898	8 " "	Feb. and Aug.	2,238,000 00	179,040 00	179,200 00
Prairie du Chien Division, 2d Mortgage	1867	1898	7.3 " "	" " "	766,000 00	55,918 00	55,808 50
Chicago & Milwaukee Division	1873	1903	7 " "	Jan. and July.	2,391,000 00	167,370 00	167,160 00
St Paul (or River) Division	1872	1902	7 " "	" " "	3,313,000 00	231,910 00	231,980 00
St. Paul (or River) Division, Sterling	1872	1902	7 " "	" " "	423,500 00	29,645 00	29,645 00
Iowa & Dakota Division	1869	1899	7 " "	" " "	421,000 00	29,470 00	29,085 00
Hastings & Dakota Division	1872	1903	7 " "	" " "	89,000 00	6,230 00	6,230 00
Consolidated Mortgage	1874	1904	7 " "	" " "	185,000 00	12,950 00	12,810 00
Consolidated Mortgage	1875	1905	7 " "	" " "	11,298,000 00	790,860 00	790,230 00
Terminal Mortgage	1884	1914	5 " "	" " "	4,748,000 00	237,400 00	237,200 00
Iowa & Dakota Division Extension	1878	1908	7 " "	" " "	3,505,000 00	245,350 00	247,050 00
Hastings & Dakota Division Extension	1880	1910	7 " "	" " "	5,680,000 00	397,600 00	407,610 00
Hastings & Dakota Division Extension	1880	1910	5 " "	" " "	990,000 00	49,500 00	49,450 00
Southwestern Division	1879	1909	6 " "	" " "	4,000,000 00	240,000 00	243,810 00
La Crosse & Davenport Division	1879	1919	5 " "	" " "	2,500,000 00	125,000 00	125,125 00
Chicago & Pacific Division	1880	1910	6 " "	" " "	3,000,000 00	180,000 00	182,700 00
Chicago & Pacific Western Division	1881	1921	5 " "	" " "	25,340,000 00	1,267,000 00	1,269,075 00
Southern Minnesota Division	1880	1910	6 " "	" " "	7,432,000 00	445,920 00	446,760 00
Mineral Point Division	1880	1910	5 " "	" " "	2,840,000 00	142,000 00	144,475 00
Dubuque Division	1880	1920	6 " "	" " "	6,309,000 00	378,540 00	361,920 00
Wisconsin Valley Division	1880	1920	6 " "	" " "	2,249,000 00	134,940 00	129,060 00
Wisconsin & Minnesota Division	1881	1921	5 " "	" " "	4,755,000 00	237,750 00	236,625 00
Chicago & Lake Superior Division	1881	1921	5 " "	" " "	1,360,000 00	68,000 00	68,125 00
Chicago & Missouri River Division	1886	1926	5 " "	" " "	3,083,000 00	154,150 00	154,025 00
Dakota & Great Southern R'y Co.	1886	1916	5 " "	" " "	2,856,000 00	142,800 00	142,875 00
Fargo & Southern R'y Co.	1883	1924	6 " "	" " "	1,250,000 00	75,000 00	75,000 00
Wisconsin Valley R. R. Co.	1879	1909	7 " "	" " "	1,106,500 00	77,455 00	77,665 00
Income Sinking Fund Convertible	1886	1916	5 " "	" " "	1,368,000 00	68,400 00	67,000 00
General Mortgage	1889	1989	4 " "	" " "	24,857,000 00	994,280 00	765,390 00
Mil. & Northern R. R. Co., 1st Mortgage	1880	1910	6 " "	June and Dec.	2,155,000 00	129,300 00	129,390 00
Mil. & Northern R. R. Co., Consolidated	1884	1913	6 " "	" " "	5,092,000 00	305,520 00	238,860 00
Interest on bonds redeemed						203,438 85	341,854 68
Interest on bonds in Investment Account and in the Treasury of the Company					$137,762,000 00	$7,814,076 85	$7,650,208 18
						325,330 00	
Total					$137,762,000 00	$7,488,746 85	$7,650,208 18

Q. Mr. Winne, have you a list of the mortgages on the [illegible]es in South Dakota? A. I have such list.

Which list was here produced by the witness for examination of counsel, was marked Exhibit 4 by the special examiner, was offered and received in evidenc.

Exhibit 4.

STATEMENT OF MORTGAGES—LINES IN SOUTH DAKOTA.

Optg. Divn.		Miles.	When Completed or Purchased.	Name of Mortgage.	Date of Mortgage.	Rate of Interest.	Amount per Mile.	Total Bonds.	Interest.
J. & D.	Iowa Line to Chamberlain	149.77	1881	I. & D. Extn.	1878	7%	15,000 00	2 246,550 00	157,258 50
"	Marion Junction to Running Water	62.85	1879	do.	"	"	"	942,750 00	65,992 50
H. & D.	Minnesota Line to Aberdeen	107.02	1881	H. & D. Extn.	1880	7%	15,000 00	1,605,300 00	112,371 00
J. R.	Aberdeen to Ipswich	26.30	1881	do.	"	"	"	394,500 00	27,615 00
H. & D.	Milbank to Sisseton	37.24	1881	do.	"	"	"	558,600 00	39,102 00
J. R.	Aberdeen to No. Dakota Line	32.73	1881	do.	"	"	"	490,950 00	34,366 50
"	Ipswich to Roscoe	15.17	1886	do.	1880	5%	15,000 00	227,550 00	11,377 50
"	Roscoe to Eureka	26.39	1887	do	"	"	"	395,850 00	19,792 50
S.C.& D.	Iowa Line to Mitchell	129.89	1886	Chi.& Pac.Wn.	1881	5%	20,000 00	2,597,800 00	129,890 00
J. R.	Mitchell to Aberdeen	128.30	1883	do.	"	"	"	2,566,000 00	128,300 00
I. & D.	Iowa Line to Hudson	39	1880	do.	"	"	"	7,800 00	390 00
S. M.	Sioux Falls Jctn. to Woonsocket	82.98	1883	do.	"	"	"	1,659,600 00	82,980 00
S.C.& D.	Elk Point to Sioux Falls	35.48	1879	do.	"	"	"	709,600 00	35,480 00
"	Tripp to Armour	20.45	1886	Chi. & Mo. Riv.	1886	5%	20,000 00	409,000 00	20,450 00
J. R.	Roscoe to Bowdle	15.55	1886	do.	"	"	"	311,000 00	15,550 00
"	Roscoe to Orient	40 99	1887	do.	"	"	"	819,800 00	40,990 00
H. & D.	Andover to No. Dak. Line	38.71	1886	Dak. & Gt. So.	1886	5%	18,000 00	696,780 00	34,839 00
S. M.	Bristol to Madison	103.02	1887	do.	"	"	"	1,854,360 00	92,718 00
F. S.	Minn. Line to No. Dakota Line	1.28	1884	Fargo So.	1883	6%	12,397 00	15,858 16	952 09
S.C.& D.	Sioux Falls Jctn. to Sioux Falls	32.33	1881	So. Minn.	1880	6%	18,380 00	594,225 40	35,653 52
S. M.	Minnesota Line to Egan	12.32	1880	do.	"	"	"	226,441 60	13,586 50
"	Egan to Sioux Falls Jctn.	1.90	1880	do.	"	"	"	34,922 00	2,095 32
	Total	1,101.06				5.69%	17,587 82	19,365,247 16	1,101,749 93

2907

Q. What does the list you have show? A. It shows the mileage in South Dakota, when constructed or purchased, name of mortgage, date of mortgage, rate of interest, amount per mile, total bonds and interest on those bonds.

Q. Now Mr. Winne, please state the amount of fixed charges or interest on the funded debt of the entire system per year? A. The amount of interest accruing on the funded debt for the entire system for the year ending June 30, 1897, was $7,488,746.85.

Q. State Mr. Winne the amount of the interest charges per year upon the lines upon the mortgages appertaining to the South Dakota lines?

Mr. Null: That is objected to as immaterial.

A. The amount of interest charges on the mortgages, South Dakota lines, is $1,101,749.43.

Q. Have you a statement showing the mileage, main track, the amount of preferred capital stock, the funded debt and the interest charges on the funded debt? A. I have such a statement. This is the statement.

Paper here produced by the witness for inspection of counsel, was marked Exhibit 5, by the special examiner, was offered and received in evidence.

EXHIBIT 5.

CHICAGO, MILWAUKEE & ST. PAUL RY. CO.

ENTIRE SYSTEM.

JUNE 30TH, 1897.

Miles of Main Track	6,148.23
Preferred Stock	$ 29,054,900 00
Common Stock	46,026,600 00
Total Stock	75,081,500 00
Total Stock per mile	12,211 89
Funded Debt	137,762,000 00
Funded Debt per mile	22,406 77
Total Stock and Debt	212,843,500 00
Total Stock and Debt per mile	34,618 66
Interest on Funded Debt	7,488,746 85
Includes ½ of Main Track owned jointly.	

Q. Have you a statement showing the miles of main track in the State of South Dakota, the funded debt and the funded debt per mile in said South Dakota, main line and the interest thereon? A. I have such a statement. This is it.

Paper here produced by the witness for inspection of counsel, was marked Exhibit 6 by the special examiner, and offered in evidence.

Mr. Null: That is objected to as immaterial.

Exhibit 6 was received in evidence.

EXHIBIT 6.

CHICAGO, MILWAUKEE & ST. PAUL RY. CO.

STATE OF SOUTH DAKOTA.

JUNE 30TH, 1897.

Miles of Main Track	1,101.06
Funded Debt	$19,365,247 16
Funded Debt per mile	17,587 82
Interest on Funded Debt	1,101,749 93

Q. Referring now, Mr. Winne, to the various statements and tables which you have produced, and which have been offered in evidence, state whether or not they are correct to the best of your knowledge? A. They are correct to the best of my knowledge.

Q. Have they been prepared for you, or under your direction from the books and records of your office? A. They have been so prepared.

Q. Now, Mr. Winne, please state the amount appearing upon your books as invested in the property, this system of the Chicago, Milwaukee and St. Paul Railway Company?

Mr. Temple: That is objected to as immaterial.

A. The amount of the investment is shown in three accounts; in our general balance sheet of June 30, 1897; first cost of road and equipment, $212,594,714.15. Bonds and stocks of other companies, proprietary companies, $881,156.12. Working capital stock, material, fuel and supplies, $1,911,287.76. The three aggregate $215,387,158.03.

Q. Do those figures which you have just given, represent the cost of construction and the acquisition of line now belonging to the system, according to the books in your possession and under your control?

Mr. Temple: Wait a minute; that is objected to as immaterial.

A. Yes, sir.

Q. Mr. Winne, will you state what has been the gross earnings of the Chicago, Milwaukee and St. Paul Railroad system for the four years preceding June 30, 1897, stating each year separately?

Mr. Temple: Might I ask Mr. Winne one or two preliminary questions to lay the foundation for an objection?

Mr. Peck: Yes.

Mr. Temple: Mr. Winne, this testimony which you are now about to give is based I suppose on an examination of the books and records of your office which are not produced here in court? A. Which are not produced.

Q. Which are not produced in court at this time? A. Yes, sir.

Mr. Temple: Now, the question and the answer it calls for is objected to as incompetent for the following reasons:

1. Because it is not the best evidence.

2. Because it appears from the testimony of the witness that the answer which he is now about to give, is based upon an examination of the records and books of his office which are not produced in court.

3. Because the testimony of an expert as to long accounts contained in books and records, is incompetent unless the books and records are produced in court for the inspection of court and counsel of opposing party.

A. The gross earnings for the year ending June 30, 1894, was $31,327,950.95. For the year ending June 30, 1895, was $27,335,369.19; for the year ending June 30, 1896, $32,681,828.88; for the year ending June 30, 1897, was $30,486,767.99.

Mr. Peck: State the operating expenses for the same period?

Mr. Temple: This testimony which you are now about to give is based upon information derived in the same way as that given in the last answer? A. Derived by an examination of the books of the company?

Q. Yes? A. Yes, sir.

Mr. Temple: Note the same objection as to the last question.

Mr. Peck: State now. (Question read.) A. The total operating expenses for the year ending June 30, 1894, were $20,114,332.65; for the year ending June 30, 1895, they were $17,043,753.09; for the year ending June 30, 1896, they were $19,676,808.04; for the year ending June 30, 1897, they were $18,577,539.08.

Mr. Peck: State the net earnings for the same periods, of the entire system?

Mr. Temple: The same objection.

A. The net earnings for the year ending June 30, 1894, was $11,213,618.30; for the year ending June 30, 1895, was $10,291,616.10; for the year ending June 30, 1896, was $13,005,020.84; for the year ending June 30, 1897, was $11,909,228.91.

Mr. Peck: State the percentage of the operating expenses to the gross earnings for the same period?

Mr. Temple: The same objection.

A. For the year ending June 30, 1894, the percentage of the operating expenses to the gross earnings was 64.21 per

cent.; for the year ending June 30, 1895, it was 62.35; for the year ending June 30, 1896, it was 60.21 per cent., and for the year ending June 30, 1897, it was 60.94 per cent.

Mr. Peck: What items, in a general way, what items enter into what are known as operating expenses of a railroad?

A. Well, the operating expenses are usually divided into groups; one group is called "Maintenance of Way," another "Maintenance of Equipment," another "Conducting Transportation," and a fourth "General Expenses."

Q. And are taxes included? A. They are. By the interstate commission, they are not called an expense. With us, taxes are a part of the expenses.

Q. They are included in your account of operating expenses? A. Yes, sir.

Q. Now, Mr. Winne, have you a condensed statement of the earnings and expenses for the period you have been testifying in relation to? A. I have, sir. I have such a statement, and this is it.

(Witness here produces statement and hands the same to counsel for inspection.)

Mr. Peck: I offer it in evidence.

Paper produced by the witness is here marked by the special examiner as Exhibit 7.

Mr. Temple: It is objected to because it is not the best evidence and also for all the reasons stated in the last objection.

Exhibit 7 received in evidence.

EARNINGS.

	1894.	1895.	1896.	1897.
From Freight	$21,550,686 79	$18,978,262 89	$23,887,930 96	$22,104,802 66
From Passengers	7,311,822 10	5,852,781 16	6,147,678 88	5,717,495 98
From Mails, Express, etc	2,465,442 06	2,504,325 14	2,646,219 94	2,664,469 35
Gross Earnings	$31,327,950 95	$27,335,369 19	$32,681,828 88	$30,486,767 99

EXPENSES.

Maintenance of Way and Structures	$4,469,837 73	$3,703,465 61	$4,374,723 66	$4,334,954 78
Maintenance of Rolling Stock	2,698,459 39	2,085,309 46	2,942,294 65	2,464,838 52
Conducting Transportation	9,621,026 93	8,348,158 08	9,102,785,46	8,475,313 40
Loss and Damage to Persons and Property	444,178 44	293,431 57	251,675 56	229,176 77
General Offices, Agencies and Advertising	1,002,288 74	966,954 97	992,079 24	984,205 40
Mileage of Cars	217,181 15	139,819 66	183,314 33	210,257 18
Taxes	1,199,077 00	1,084,700 45	1,082,083 74	1,184,230 86
Renewal Account	.....	.....	350,000 00	200,000 00
Miscellaneous	462,283 27	421,913 29	397,851 40	494,562 17
Total Expenses	$20,114,332 65	$17,043,753 09	$19,676,808 04	$18,577,539 08

RECAPITULATION.

Gross Earnings	$31,327,950 95	$27,335,369 19	$32,681,828 88	$30,486,767 99
Total Expenses	20,114,332 65	17,043,753 09	19,676,808 04	18,577,539 08
Net Earnings	$11,213,618 30	$10,291,616 10	$13,005,020 84	$11,909,228 91
Average Miles in Operation	6,147.08	6,159.35	6,153.27	6,152.55

Mr. Peck: You have testified that as general auditor of the company, you have charge of the accounts and books and records of the company? A. I have, sir.

Q. The tables which have been offered in evidence and the figures to which you have testified, state whether they have been prepared by you, or under your direction? A. In a large number of cases, they have been prepared personally by me; if not so prepared, they have been prepared under my personal direction and I have personally examined each of them.

Q. Have you while the figures which you have testified to were being prepared, given your personal time and attention to supervising their preparation? A. I have, sir.

Q. And are they to the best of your knowledge and belief true and accurate statements? A. They are true and accurate statements to the best of my knowledge and belief.

Q. Now, Mr. Winne, going a little more into detail, how did you arrive at these figures of expenses and earnings and the cost of various items that you have testified to; how did you get at it? Explain fully? A. It is rather difficult in a short time to explain our system in detail.

Q. I don't want it in detail; I want you to explain it briefly? A. Of course the foundation of the whole structure is the reports which reach us from our agents and conductors, and from agents of other roads with which we do a joint business; that is the commencement of the thing. Agents make reports of freight which they have forwarded and to what point it has been forwarded; they also make reports of freight rewhich they have received and from what point it has been received and those reports are balanced, one against the other; what is reported forwarded by one must be shown to

have been received by another and when that balance is obtained we have our gross amount of earnings which is collectible by us; then, of course, it is necessary to figure out how much belongs to us and how much belongs to other lines with which we are doing a joint business. That is figured out on the division established and the amount due from one to the other is ascertained, and the difference settled by draft, and in the same way as to the passenger business. Our agents are charged with the total receipts from ticket sales; the agent sells tickets from his station to New York or some other point in the east, and we have to apportion the amount between the different roads concerned; we pay them what belongs to them and the rest of course is retained for our uses. Our conductors report each trip the amount of cash they have collected. In a general way, that is about all there is to the revenue. Of course you understand it is an immense amount of work to balance all of these reports.

Q. How often are these reports received? A. Our reports, the detailed reports, are made once a month.

Q. How often do the conductors make reports? A. The conductors make report for every trip and the agents send in their way-bills to us daily.

Q. I want it explained so that the mechanism of the whole thing will be clear to the court? A. The agents also send in to us various reports; they send in weekly reports, not in detail, but simply to permit us to make an estimate of what business we are doing, but our balances are made monthly and our settlement with our connections are made monthly.

Q. State whether, if you please, a large number of reports information and data which through various clerks and attaches of your office are finally entered in the books of the company? A. Yes, sir, an immense amount.

Q. How large a force do you have in your office? A. My force at present is about 200.

Q. Is the work of your office systematized so that each clerk or employe has certain duties which he regularly performs in connection with the keeping of the accounts of the company? A. It is so systematized, yes, sir.

Q. Is it possible, Mr. Winne, to have any correct idea of the results of operating a railroad other than in the manner in which you have stated; A. It is not.

Q. No one man can have an actual knowledge of the whole or of any large proportion of the whole of such a business? A. No, sir.

Whereupon the further taking of testimony herein was continued to Wednesday, January 19, 1898, at 10 o'clock a. m. of said day, to be resumed at the same place.

January 19, 1898.

Direct-Examination of Mr. Winne continued by Mr. Peck.

Q. Mr. Winne, have you in your office any books that show the operating expenses, the earnings, gross and net, of the system? A. Yes, sir.

Q. Is that book made as you described yesterday in your testimony from reports and condensations of figures from various sources? A. Yes, sir.

Q. Will you produce that book if desired by counsel? A. I will.

Q. That book is in daily use in your office? A. It is, sir.

Q. And can it be spared from your office without stopping your business? A. Yes, sir; a reasonable time.

Q. It can be brought here at any time counsel may desire while this evidence is being taken? A. It can.

Mr. Peck: Counsel for the complainant now states that all the books, records, papers, documents in the office of the general auditor, in respect to which testimony has been given by Mr. Winne, are in his office in this building and will be produced here at any time while the testimony is being taken at the request of counsel for the defendants.

Q. Mr. Winne, you stated yesterday the method in which the earnings are ascertained. State the method by which you ascertained the expenses, operating expenses, of the system? A. From the beginning of the operation, the first thing, the first principal item is the labor. Pay-rolls are made up by the different superintendents for the train service and the men employed on the road on maintenance of the way. They are made up by the storekeeper or his assistant for the engine men and round house men. The pay-rolls for the clerks are made up in this building. The material is purchased in general by the purchasing agent. He buys everything except the coal, rails and ties. His purchases are charged by him to the different departments to which they are shipped; the general store or the superintendents as the case may be. Each month the superintendent makes a report in detail of the material used. Those are examined in the auditing department and then summarized there. Each department is given its proper credit for material used, and the account for which it is used is charged. If it is an operating expense it is charged to its proper expense account; if for new work, construction of locomotives or cars or new structures additional to the property, it is charged to cost of production. In addition to that there are other expenses; for rents settlement of personal injury cases, losses and damages to

freight, damage to property, stock killed, fire losses, insurance, and matters of this nature that go through no particular department. A voucher is made and the expense charged on the auditor's book to the proper account.

Q. Now, Mr. Winne, you are able at the end of each month or any certain fixed period to know exactly what earnings have been received in the operation of the road, and what expenses have been incurred in that operation? A. Yes, sir.

Q. Are taxes paid also in addition to these other expenses? A. Yes, sir; to a very large amount.

Q. You will be able, if called upon, to state what the taxes have been? A. Yes, sir.

Q. Upon the lines for any given time? A. Yes, sir.

Q. In your method of keeping the accounts, are the taxes classed as an operating expense, or in what manner are they entered upon the books of the company? A. They are an operating expense, as shown in all our reports.

Q. Are you able to state the receipts of the operation of the lines in South Dakota, as they appear upon the books of the company? A. Yes, sir.

Q. Have you prepared a statement showing the gross earnings in the State of South Dakota for the four years ending June 30, 1897? A. I have.

Q. Will you produce it? (Witness produces paper.) A. This is the statement.

Mr. Peck: I offer the statement in evidence.

Statement marked by the examiner "Exhibit 8."

Examination by Mr. Null.

Q. Mr. Winne, do you keep the regular accounts in your office of which this statement is a summary? A. No, not entirely.

Q. This statement, then, is a computation based upon some system of apportionment. That is a fact, is it not? A. Yes, sir.

Q. Now, then, the data, disclosed by this statement is not shown by any regular account kept in your office? A. We keep no separate set of books for Dakota or Illinois or Wisonsin. We keep a set of books for the system, but our earnings are divided each month between the states.

Mr. Null: We object to the introduction of the exhibit in evidence on the ground that it is incompetent and immaterial.

Exhibit 8 received.

Examination by Mr. Peck.

Q. Mr. Winne, what different amounts in respect to the earnings in South Dokata are shown upon this table which has just been offered in evidence? A. It shows the total freight earnings, and the proportion which is local to the state, and the proportion of it that is inter-state business; shows the passenger earnings total, the proportion local, and the proportion inter-state; shows the express, mail and miscellaneous earnings within the State of South Dakota.

Q. And the aggregate of earnings from all sources? A. And the aggregate of earnings from all sources in South Dakota.

Q. That is on the basis given? A. Yes, sir; on the basis given.

Q. Now, explain the manner in which you arrive at these different items, taking first the local freight item? A. The local freight earnings, as stated, is the total revenue for the transportation of freight between points within the State of South Dakota.

Q. And the figures given are the actual earnings for transportation of freight, between points in South Dakota? A. They are.

Q. The column showing the inter-state earnings from freight in South Dakota, how is that reached and made up in this statement? A. The amount shown in the column of inter-state freight is the proportion of revenue accruing to the State of South Dakota on business going from South Dakota points to points outside of the state, and from points outside the state to points within the state, the proportion being arrived at on the basis of the actual haul of the freight, as the miles in South Dakota bear to the total miles hauled.

Q. It is then based upon the actual haul of that particular freight? A. On the actual haul of that particular freight. The same explanation will apply to the passenger. They are made in precisely the same manner.

Q. If a shipment of freight starts from a point in South Dakota, destined to some point outside of South Dakota, what proportion of the revenue received for hauling that freight is entered here in this statement of inter-state freight. A. It is proportioned on a mileage basis. If the distance is 200 miles 100 of which is in South Dakota, South Dakota would be given one-half of the revenue.

Q. And that is the case whether the freight is going out of South Dakota or coming into South Dakota? A. It is the same.

Q. The other earnings here,—express, mail and miscellaneous,—are arrived at in what manner? A. As to express earnings, we have contracts with the express companies providing for the payment of a lump sum covering the business of the entire system, and we have no report showing the actual express business done, but we have obtained from them a statement of the relative importance of the lines, as to the express business done, and upon that we have divided the earnings over our entire system.

Q. The column in this exhibit, headed "Miscellaneous." How are the figures in that column arrived at and what do they represent? A. The miscellaneous earnings represent earnings that are not of sufficient importance to specify in themselves. I think a large proportion is extra baggage, telegraph earnings, sleeping car earnings, milk earnings, if there are any, and news privileges on trains. I think that covers it all.

Q. How about the mail? A. As to mail earnings, our mail

contracts provide for the payment of a certain sum per mile of road, based on the weight of mail carried; and we are, therefore, able to give what may be called the actual mail earnings in Dakota, knowing the amount we get from the government per mile on the different routes.

Q. Have you prepared a statement showing the gross earnings from all sources in South Dakota, the operating expenses, taxes and interest on the funded debt for the four years ending June 30, 1897, and, if so, will you produce it? A. I have such a statement and this is the statement.

Witness produces paper which is marked "Exhibit 9."

Mr. Peck: I offer Exhibit 9 in evidence.

Mr. Temple: Objected to as incompetent for the following reasons: First, because it is not the best evidence; second because no foundation has been laid for evidence of such character as that now offered.

Exhibit 9 received.

Q. In this exhibit which is just offered, Exhibit 9, the first column is headed "Gross Earnings." Explain what those figures represent, and how they are arrived at. A. The figures under the heading "Gross Earnings" represent the total earnings from all sources in the State of South Dakota, arrived at as previously explained, for the four years ending June 30, 1897, local and inter-state from all sources.

Q. In making up these gross earnings what amounts are credited to South Dakota and included in these figures? A. South Dakota is credited with all of the earnings derived from business originating, terminating, and business carried entirely within the state, and its mileage proportion of all inter-state business.

Q. You mean its mileage proportion of all inter-state business based on actual shipments in and out of South Dakota, do you not? A. Yes, sir; on the basis of the actual miles hauled.

Q. Upon that basis what were the gross earnings per mile in South Dakota for the four years included in your statement? A. By the year?

Q. Yes, sir. A. For the year ending June 30, 1894, $1,671.80 per mile.

Mr. Temple: Let the record show that the counsel for defendants interposes the same objection to this testimony, which it is apparent the witness is giving from the exhibit offered in evidence, as interposed to the introduction of the exhibit itself.

A. For the year ending June 30, 1895, $1,123.23; for the year ending June 30, 1896, $1,414.26; for the year ending June 30, 1897, $1,457.96 per mile. The average earnings per mile, for four years, were $1,416.81 per mile.

Q. What were the taxes in South Dakota for the same period? A. The taxes for the year ending June 30, 1894, were $99,233.59; for the year ending June 30, 1895, $99,012.73; for the year ending June 30, 1896, $100,690.97; for the year ending June 30, 1897, $98,482.68. A total for four years of $397,419.97.

Q. Those were taxes actually paid by the company in South Dakota? A. Yes, sir.

Q. For the period named? A. Yes, sir.

Q. What were the operating expenses in South Dakota for the same period? A. The operating expenses, which includes taxes, for the year ending June 30, 1894, was $1,245,982.38; for the year ending June 30, 1895, $976,431.74; for the year ending June 30, 1896, $1,228,694.08; for the year ending June 30, 1897, $1,111,394.72. A total for the four years of $4,562,502.92.

Q. State in what manner you arrive at the operating expenses in South Dakota? A. The operating expenses in South Dakota are arrived at, (excepting taxes, which are actual)—are based on the miles made by revenue trains (trains earning revenue) within the state, compared with the total mileage of the trains earning revenue, on the entire system, which basis is the one recognized and urged by the annual convention of railroad commissioners held in Washington, I think, in May 1895.

Mr. Null: I move to strike out the last remark of witness as not being responsive to the question, and as being immaterial and irrelevant.

Q. Upon the basis you have named, what were the operating expenses per mile, in South Dakota, during the period you have mentioned? A. The operating expenses, including taxes, per mile of road in South Dakota, for the year end-

ing June 30, 1894, was $1,131.68; for the year ending June 30, 1895, $886.86; for the year ending June 30, 1896, $1,115.98; for the year ending June 30, 1897, $1,009.44. An average per mile for the period of $1,035.99.

Q. State what was the percentage of operating expenses to gross earnings in South Dakota during the period mentioned? A. The per cent. of operating expenses, including taxes, to gross earnings in the State of South Dakota for the year ending June 30, 1894, was 67.69 per cent.; for the year ending June 30, 1895, 78.96 per cent.; for the year ending June 30, 1896, 78.91 per cent.; for the year ending June 30, 1897, 69.24 per cent. An average for the period of four years of 73.12 per cent.

Q. This percentage of operating expenses which you have just testified about was arrived at upon what you call the train mileage basis? A. Train mileage basis.

Q. Will you explain more fully what is meant by the term "train mileage"? A. Well, train mileage means simply the number of miles run by trains. The train mileage used in this case is what we call revenue trains. That is to say, trains which produce revenue to the company, and consist of exclusively passenger trains, exclusively freight trains, and what are called mixed trains, which are both freight and passenger.

Q. Does it include construction trains or any trains which do not earn money by their operation? A. It does not. It is exclusively revenue earning trains.

Q. Go on and explain how you reached the conclusion on this train mileage basis? A. Of course, we have each day a record of every train on the line, and the miles that train makes for the entire system, and we know the number of miles any train makes in any state and a careful record is

made of that, and we are thus enabled to tell how many miles are made by revenue trains in each state. Those results are summarized and we find for any year the actual train mileage of which, so many miles are made in Wisconsin, so many in Illinois, and so many in each other state, and the expenses are divided in that way. As the mileage in South Dakota is to the mileage of the entire system, so are the expenses in South Dakota to the total expenses of the entire system.

Q. That basis of apportioning the operating expenses is recognized, I understood you to say, by some board of railroad commissioners?

Mr. Null: Objected to as immaterial and not binding on these defendants.

Q. I will ask you to state a little more fully. It was the subject under discussion? A. Yes, sir, and had been for a number of years. The proper way of arriving at information applying to the several states; and at this convention held at Washington in May, 1895, a resolution was introduced and carried that the information should be asked from the several railroad companies, and should be prepared on the basis there laid down.

Q. That organization is composed, is it not, of the members of the various state boards of railroad commissioners and the members of the Inter-State Commerce Commission? A. So I understand it. I do not know whether the members of the Inter-State Commerce Commission are members of the society, but they meet with them, consult with them.

Q. And the object of their meeting is to discuss all sorts of railway problems, including accounts?

The Witness: I cannot state positively that the members of the Inter-State Commerce Commission met with this or-

ganization, but the secretary of the Inter-State Commerce Commission has been the secretary of the convention at times.

Q. Mr. Winne, what is the average rate of interest on the mortgages covering the South Dakota lines? A. The average rate of interest is 5.69 per cent.

Q. Have you computed the net earnings in South Dakota upon the basis you have named for the four years in respect of which you have been testifying? A. I have.

Q. On what amount per mile would the net earnings in South Dakota, for the four years mentioned, pay interest at 5.69 per cent.? A. The net earnings in South Dakota for the year ending June 30, 1894, would pay 5.69 per cent. on $9,492.40 per mile; for the year ending June 30, 1895, they would pay 5.69 per cent. on $4,154.22 per mile; for the year ending June 30, 1896, on $5,242.18 per mile; for the year ending June 30, 1897, on $7,882.53 per mile. For the four years on an average of $6,692.83 per mile.

Q. Taking South Dakota as a part of the Chicago, Milwaukee and St. Paul Railway system, and charging it with the proportion of the entire interest charged to the system on the mileage basis stated, what amount of interest would be chargeable to South Dakota lines, and what amount of deficit there would be in the payment of that interest from the earnings of South Dakota?

Mr. Null: Objected to for the reason that it does not call for the interest accruing upon actual incumbrance on South Dakota lines, and for the further reason that the interest charged is immaterial.

A. Charging to South Dakota interest on the funded debt, on the basis of the miles of road in South Dakota, as compared with the mileage of the entire system, interest charges

would be for the year ending June 30, 1894, $1,350.674.64, producing a deficit of $756,005.23; for the year ending June 30, 1895, the interest charges, $1,373,287.87, producing a deficit of $1,113,038.83; for the year ending June 30, 1896, the interest charges would be $1,370,147.07, producing a deficit of $1,041,740.55; for the year ending June 30, 1897, the interest charge would be $1,347,974.43, producing a deficit of $854,158.49. For the period of four years ending June 30, 1897, the interest charges would be $5,442,084.01, producing a deficit of $3,764,943.10.

Q. If, instead of computing the interest charged in South Dakota upon the mileage basis, or, its proportion of the entire system, you should compute it upon the basis of the actual interest paid on existing incumbrances upon the South Dakota lines, state what the result would be? A. The actual interest chargeable to the Dakota lines, based on the actual amount of incumbrances under the Dakota mortgages, would be, for the year ending June 30, 1894, $1,101,-749.93, producing a deficit of $507,080.52; for the year ending June 30, 1895, interest chargeable, $1,101,749.93, producing a deficit of $841,500.89; for the year ending June 30, 1896, the interest chargeable, $1,101,749.93, producing a deficit of $773,343.41; for the year ending June 30, 1897, interest chargeable, $1,101,749.93, producing a deficit of $607,933.99. And for the period of four years, ending June 30, 1897, interest chargeable would be $4,406,999.72, producing a deficit of $2,729,858.81.

Q. State whether the various exhibits which were produced and which have been offered in evidence are true and correct statements from the books of your office? A. They are true and correct statements.

Q. And all of them, including those produced this morn-

ing, were made up under your direction, or by yourself personally? A. They were made up under my direction or by myself personally.

Q. These different statements end on June 30th of each year. Please explain why that date is selected for your figures? A. The year ending June 30th, has been adopted by the company as its fiscal year and is the year also adopted by a great majority of the different railway commissions, and it is the most convenient time for closing our accounts.

Q. And that is the reason why these various statements are made to terminate on the 30th of June of each year? A. That is the reason.

Adjourned to 2 o'clock p. m. this day.

2 o'clock p. m.

W. N. D. WINNE resumed the witness stand.

Cross-Examination by Mr. Null.

Q. Mr. Winne, in the account of cost of road and equipment the item stated at the end of the last fiscal year, $212,594,714.15, what does that include? A. That includes the cost to this company of the property which they had at that time.

Q. Exclusively railroad property? A. Exclusively railroad property.

Q. Would it include any town site property or anything aside from the roadbed and its accompanying properties? A. It includes only property used for railroad purposes.

Q. And does that represent the actual cost, so far as you know? A. It represents the actual cost so far as I know.

Q. That account was begun with the organization of the company? A. Yes, sir.

Q. And has been continued from that time to the present. A. Yes, sir.

Q. The next item, "Bonds, stocks, etc., of other companies" $881,156.12 here, are any of the properties involved in this item situated in South Dakota? A. I think nothing in South Dakota.

Q. All the property or interests which the company have in South Dakota it holds as a direct owner? A. Yes, sir.

Q. The next item is "Stock, material and fuel," $1,900,000 and some odd dollars, what does that represent? A. That represents the cost of material and fuel, which it is necessary to have continually on hand for the operation of the system.

Q. It means, then, the supplies on hand for the operation of your road? A. Coal, rails, ties, and all kinds of material and supplies.

Q. I understand you to say in your testimony that the company originally had a short line of road from Portage City to La Crosse; can you state the mileage of that portion of road? A. It is in the neighborhood of one hundred four miles.

Q. Were you connected with the company at that time? A. I was not.

Q. This information you have acquired by your subsequent relations with the company? A. Yes, sir.

Q. Are you able to state what the next line of road is that was acquired by the company? A. I cannot positively, from personal knowledge, but I can tell you as I have it in mind.

Q. That is as close as I care to get it. A. I think we

afterwards acquired a road, extending from Brookfield Junction to Columbus in Wisconsin—yes, I think Columbus.

Q. About what time was this? A. This must have been in 1863 or 1864,—1863, I should say.

Q. Do you know when the company first secured a line into Chicago; that is, about the time? A. That was either in 1872 or 1873. I cannot state positively in regard to that.

Q. That was the line from Milwaukee? A. Milwaukee to Chicago.

Q. Can you tell about when the company acquired what is known as the Hastings and Dakota line? A. Part of the Hastings and Dakota line in Minnesota, that is, from Hastings to Glencoe, must have been purchased about 1872.

Q. Did the company construct its own line from Glencoe to Bowdle? A. Yes, sir.

Q. Did the company acquire the Fargo Southern line by purchase or construction? A. By purchase.

Q. About when was that acquired? A. In 1883, about 1883.

Q. About when was it that the Glencoe and Bowdle line was constructed? A. The line from Ortonville to Aberdeen was completed in 1881.

Q. When did the company acquire the Southern Minnesota line? A. In 1880.

Q. Did they acquire that by purchase or construction? A. By purchasing the line from La Crescent to Sioux Falls.

Q. And from Sioux Falls to Woonsocket, what was about the date of that construction? A. Sioux Falls Junction to Woonsocket was completed in 1883.

Q. When did the company acquire the Iowa-Dakota Di-

vision? A. The line from the Dakota and Iowa line to Chamberlain was constructed by the company, and was completed in 1881.

Q. And that was acquired by construction? A. By construction.

Q. When did the company acquire the Manilla line to Sioux City? A. I can't give you that date, without reference to the books.

Q. Can you tell about when the line from Sioux City to Scotland Junction was acquired? A. My impression is it was in 1880, but I have not the exact information here.

Q. Do you know whether that was acquired by construction or purchase? A. The line from Sioux City to Yankton and from Elk Point to Sioux Falls was purchased.

Q. From whom was that purchased? A. The corporation was named the Sioux City and Dakota Railroad Company.

Q. Now, if I understand correctly, the company acquired the line from Sioux City to Yankton, and from Elk Point to Sioux Falls by purchase? A. Yes, sir.

Q. And all other South Dakota lines were acquired by construction? A. The Fargo Southern, of which a very small part of it, only about a mile, is in South Dakota, was acquired by purchase, and the Southern Minnesota road, from the State line, the Minnesota line, to Sioux Falls, was included in the purchase. The road was not completed at that time, but the Southern Minnesota Company was to finish it.

Q. And these South Dakota lines were either purchased or constructed somewhere from 1879 to 1884? A. Yes, sir.

Q. Can you tell from the records of your office the consideration that was paid for the lines that were acquired by purchase? A. Yes, sir.

Mr. Null: I don't mean for you to go now, but I would like to have you get the information for me later; make a memorandum of it. I would also like the amount charged to construction account, on account of the construction of lines in South Dakota.

Q. Can you state either from memory, or by reference to your records, the cost of materials used in the construction of these lines at that time? A. Do you mean, the aggregate cost, or the prices of different materials?

Q. Yes, sir. A. I cannot tell without some investigation.

Q. Can you get that information from the office? A. Yes, sir.

Q. That is, the value at that time of ties, and rails, rail fastenings and other materials used in the construction of the lines? A. Yes, sir.

Q. When these items of construction were charged to the construction account, explain the method of making the entry; that is to say, when the line was constructed from Sioux Falls Junction to Woonsocket, did you enter in the construction account the expenditures for materials as it was made, or was it entered in a lump sum from the estimate of engineers or parties making the expenditures? A. It was the custom to pay the contractors each month for work done, on the estimate of the engineer, as far as the work covered by contract was concerned. In work that was done by the company, all expenses were charged out each month just as we would charge our expenses each month from the same report, the actual material and labor expended on this work.

Q. Then, during that construction if, during a certain month, you purchased a supply of rails and ties, the pur-

chase was charged directly to construction account, was it? A. It would not be charged from the bills purchased.

Q. That is what I want to get at? A. No, when the rails were purchased they would be shipped; rails for the use of the entire system would be purchased or contracted for at one time. As fast as those rails arrived they would be shipped all over the line where they were needed and when they were shipped they would be charged to the responsible officer at that place, the division superintendent, or whoever it might be; they would be charged against him. Then when they were used he would make a report of how and where they were used, and he would be given credit, and the proper account charged, whether it was repairs, renewal or whatever account the material was used for.

Q. So that when a given quantity of material was shippel to the superintendent of the South Dakota Division, it stood upon your books as charged to that superintendent until he reported to you the use which he had made of the material? A. Yes, sir.

Q. And then it would be either charged to the construction account, or to renewal account? A. As it was used, yes, sir.

Q. Have you an account designated "Renewal Account?" A. We have an account designated " Renewal of Rails and Renewal of Ties and Expense Account."

Q. The grading and work of that kind, was done by contractors? A. Yes, sir.

Q. And monthly payments were made upon the estimates of your engineers? A. Yes, sir.

Q. Were those monthly payments charged directly to construction account? A. Directly.

Q. Do you know whether or not the company did its own track laying, or was that contract work? A. I am under the impression that the company did their own track laying, but I would not be positive about it.

Q. Now, by the way of illustration, suppose that the company did its own track laying from Sioux Falls Junction to Woonsocket, how did the labor get into the construction account? That is, by what system? A. It would be charged directly from the monthly pay-rolls.

Q. Your superintendent would report to you the amount of labor which had been devoted to construction? A. He would send in regular pay-rolls for every gang employed on work between such and such a point upon which the men receipted for their pay, and that roll would be charged; if the work was done, every account of that extension of track, the roll would be charged to that extension. If it was for repairs it would be so charged. The distribution would be made on the original pay-roll itself.

Q. So, then, as I understand it, this item of $212,000,000 and some odd dollars represents the amount of money expended by the company in acquiring these properties, either by purchase or construction? A. Yes, of course, it is not all money; that is to say, some of the property was acquired by exchange of securities.

Q. I am only directing your attention to your bookkeeping; to your methods. A. Yes.

Q. Now, in the case of the replacing of a structure; what portion, if any, of that expense would you charge to this account? A. The rule for that has been that any actual betterment to the property would be charged to the cost of the road. We are obliged to maintain the road at the cost of operating expenses and any addition to it is charged to the cost of the road.

Q. Then, if a wooden bridge were destroyed and replaced with another similar wooden bridge, it would be charged to current expenses, or operating expenses? A. Exactly.

Q. More properly maintenance of way or bridges? A. Yes, sir.

Q. If, however, a wooden bridge, were replaced by a steel bridge, or a more expensive bridge, the difference would be charged to the cost of the road? A. The difference between the cost of the structure, the smaller one, and the steel structure or more expensive one would then be charged to the cost of the road.

Q. And that rule would obtain in the general management of the road? A. I think that is a general rule.

Q. I see in your account of material on hand, on page 34, of your last annual report, an item, "New Steel Rail 743 tons," with a certain sum set opposite that as representing the present value, that is what it is intended for, is it? A. Yes, sir.

Q. That is, 743 tons of new steel rail are valued at $18,-119.31? A. Yes, sir.

Q. Those are rails now on hand to be used in replacing or construction, as the occasion may require? A. Yes, sir.

Q. Are they in store at any particular place, or are they distributed over the system? A. They are probably quite well distributed over the entire system, so that in case of a breakage we will have one or two on hand.

Q. "Old Steel Rails 16,065 tons," with a value indicated of $173,947.01. How is that value determined? A. That value is put upon them, based upon the price of new material. It is the price that is fixed by the managers of the company, and it fluctuates with the price of new material.

Q. And at the rate there indicated being somewhere near $11 per ton? A. Yes, sir.

Q. New rails are something like $24? A. I don't know the present quotation.

Q. Old steel rails are rails that have been in use, are they? A. Yes, sir.

Q. Describe the treatment which they receive, so as to give them any value? A. When new rails are put in, of course, a corresponding length of old rail comes out. The old rails are sorted over and those that are fit to be used in places of lighter traffic or in side-tracks, without there being any labor expended on them, are put in one class at a valuation. Others of them have to go through our rail mill to be straightened and sawed and re-punched, perhaps, are put into another valuation, and still another class, that are not fit for use at all are sent to the rail mill to be sawed up into lengths and sold as scrap. When the value of those three classes of rails is determined, that amount is credited to renewal of track, to the same account to which the new rails are charged. Of course, the old rails then becomes as through they had been purchased for money; they are a part of the material on hand.

Q. These items of new steel rails and old steel rails have no relation whatever to the cost of road, except as they might possibly be used in the construction of new line? A. That is all; they are substantially the same as new material on hand, for use wherever required.

Q. Now, in case 100 tons of new rails should be used upon a given division of your road, and the same quantity of old rails taken up, would there be any item of any kind either charged or credited to construction account? A. No, sir.

Q. Or to cost of road? A. No, sir.

Q. It is a fact, is it not, that these rails designated as old rails are used largely for replacement and repairs upon the lines where the traffic is lighter? A. It would naturally be so, but I am not competent to testify as to that point; but that is what I should do with them.

Q. Now, suppose that 100 tons of new rails should be placed on the line between Milwaukee and Chicago at a cost, say, of $30 per ton, and 100 tons of old rails taken up and used to replace old rails on the line in Dakota, on which you place a valuation of about $11 per ton, how would these items be entered? A. The old rails would be charged at the price that they were credited to the Chicago division, $11 or $12, as the case might be, and the old rails taken out of the Dakota division would be credited to that division, under the division I have explained as to their value for use or scrap.

Q. So that the first item I have suggested would be charged to the Milwaukee division at $30 per ton, and credit it with $11 per ton? A. Yes.

Q. Then the South Dakota line would be charged with $11 per ton, and credited with the scrap iron that came out? A. Yes, sir; whatever the rails were worth.

Q. And nothing in that transaction would affect the construction account, or cost of road? A. Nothing whatever.

Q. I now call your attention to the equipment account; can you separate this item of cost of road and equipment so as to designate with any degree of certainty, how much of it is cost of road, and how much of it is equipment? A. I cannot.

Q. Explain why you are unable to do so? A. Because a great many of the lines now operated by the company were purchased as an entirety, the road and equipment, and no

valuation was placed upon the equipment at the time it came into our hands, and I could not tell you how much equipment came in with a good many of the lines.

Q. All expenditures of the company for engines and cars and other equipment is included in this item. A. Included in that item, yes, sir; for additional equipment; not for renewals.

Q. Do you know about what the locomotives in use in 1881 were worth; not accurately, but about? A. I should say in 1880, probably about nine or ten thousand dollars; in that neighborhood.

Q. Suppose, then, that a locomotive was purchased new, say, in 1880, for $10,000; your equipment account would be charged with that amount? A. Yes, sir.

Q. Would any of the repairs on the engine in subsequent use be charged to this account? A. No, sir.

Q. Suppose an engine was destroyed; what would be the result with this account? A. It would not affect that account; new locomotives would be purchased to replace it; the cost of which would be charged to expenses.

Q. So that it would not affect the equipment account at all? A. No, sir.

Q. And the cost of the replacement of equipment either worn out or destroyed, is charged to expenses? A. Charged to expenses, yes, sir.

Q. Has this company since your connection with it as auditor or assistant auditor sold any road or equipment? A. It has not sold any road that I can think of; it has sold perhaps an old locomotive that was useless to us.

Q. Now, in the case of the selling of an old locomotive, and the purchase of a new one, for instance if the old loco-

motive was sold for $1,000, and a new one was purchased for $10,000, where would this transaction be entered? A. It would be, $9,000 to be charged to expenses for renewal of locomotives, or replacement of locomotives.

Q. Would this have any effect upon the cost of the road and equipment account? A. None whatever.

Q. Are there any items that you can now recall which would affect this cost of road and equipment account aside from the purchase of equipment and the construction or purchase of road? A. I don't think of anything, Mr. Null.

Q. I believe at one time steel rails were supposed to cost $125 or $130 per ton? A. Yes, sir; I have one purchase in mind of upwards of $130 per ton, but only one.

Q. Was there any considerable amount of steel rails purchased by the company at a price exceeding $100 per ton? A. I think quite a good deal, that is, prior to the time of which we were speaking.

Q. That was in the 70's? A. Well it must have been in the very early 70's I should say.

Q. Do you recollect about the cost of steel rails at the time of this construction in South Dakota? A. I think towards the latter part of this time they were paying about $57 or $58 per ton for rails in Chicago.

Q. Let me ask you if the company had purchased a quantity of steel rails at $100 per ton say, the amount of such purchase would be charged to cost of road, assuming that the rails were used in construction? A. Most certainly, yes, sir.

Q. Now, is this account affected in any way by the fact that steel rails are now worth less than $30 per ton? A. No, sir.

Q. This depreciation in value has never been charged out of the construction account? A. No, sir.

Q. The same would be true of the equipment, would it not? A. The same would be true of the equipment; the road and equipment have both been thoroughly maintained.

Q. So that in your cost of road and equipment account you have simply preserved identity rather than value? A. Well, I hardly know how to answer that; I presume the value has been preserved as well as the identity.

Q. But as a matter of fact, your equipment account for instance represents 823 locomotives, but it does not necessarily represent the value of those locomotives to-day? A. That is to say, we might purchase 823 locomotives to-day for less money than those cost us?

Q. Yes? A. Very likely that is true, yes, sir.

Q. And the same would be true of the freight and passenger cars and all equipment? A. Yes, sir.

Q. This account upon page 34 is supposed to represent the value of these materials and articles described as ascertained about the 30th of June, 1897? A. Yes, sir.

Q. I notice that the item of cost of road and proprietary stocks and bonds held, and material on hand are very close to the amount of the capitalization of the company; I will ask you if the capitalization of the company varies from time to time? A. It is very liable to do so for in years past they were spending a great deal of money on the road which they could not get back; we have spent money from the earnings which we could not capitalize. That would make a variation which still exists.

Q. Let me ask you if it is or is not a fact that the company holds its capitalization very close to the cost of road and equipment? A. Yes, sir.

Q. And is that purposely done, or is it merely a coincident? A. It is purposely done, that is to say, the stockholders would naturally be unwilling to have all their money spent on the road.

Q. You said something awhile ago about some of the purchases having been made by exchange of securities or considerations other than cash; can you give us these items in the form of a statement? A. That would necessitate our going back over our accounts from 1863 to this date.

Q. I mean with reference to the South Dakota lines only? A. I can tell you yes, how the purchased lines in South Dakota were acquired.

Q. The consideration, whether it was cash and if securities, what were they? A. Yes, sir.

Q. I would like such a statement.

Q. Calling your attention to Exhibit 4, is it a fact that as these different lines were acquired in South Dakota, that mortgages upon the distinct lines were executed and placed upon the market? A. Not the Dakota lines by themselves, but the lines of which they form a part.

Q. Are the Dakota lines included in any general mortgage upon the system? A. They are included in the general mortgage of the company to-day, yes, sir; the present general mortgage of the company.

Q. When was this general mortgage given? A. In 1889.

Q. What was this general mortgage? A. This general mortgage was a mortgage which was made for the purpose of refunding the debt of the company.

Q. And what is the amount of that mortgage? A. I think it is for $150,000,000.

Q. It is not to refund all other indebtedness of the com-

pany? A. It provides that bonds to the amount of our debt as it stood at that time were to be issued only to refund that debt. It provides also for the payment of any premium that might be necessary in the redemption.

Q. Have you any circular or prospectus of that issue of bonds? A. I have a copy of the mortgage.

Q. Is it so that I can have a copy of it? A. Yes, sir.

Q. Did the company get out any prospectus at the time of the placing of this general mortgage? A. I have no knowledge of that; the stockholders were notified, a circular was issued to the stockholders of what was contemplated; their assent of course was necessary to the execution of the mortgage.

Q. Now, what amount of bonds issued under that general mortgage have been disposed of by the company? A. June 30, 1897, $24,857,000 had been issued.

Q. To what use has this money been applied? A. The larger part of it was for the exchange of the bonds.

Q. And has any part of it been exchanged for bonds upon the South Dakota lines? A. No, sir. I am not quite positive about that whether any part was issued for Dakota bonds or not; I will ascertain. Leave that open if you please.

Q. It is not material unless you find considerable of an item? A. Well, there is not; there is very little, if any.

Q. What is the market value of the bonds under this general mortgage? A. I am not informed as to that, Mr. Null.

Q. Have any of them been sold by the company for cash? A. Some have been sold, yes, sir.

Q. Do you know at what rate they were sold? A. Some were sold at 85 and some at 90 and some at 92½.

Q. About when were those sales made? A. The first sale must have been made in 1889 or 1890.

Q. Does the company now offer these bonds? A. I think not, sir; I am not informed as to that.

Q. So, then, with the exception of the general mortgage issue in 1889, there is no other general incumbrance upon the South Dakota lines? A. You notice in the list of mortgages there "Consolidated mortgages of 1874 and 1875", those mortgages were executed for the same purpose as the general mortgage for the refunding of the debt as it then stood, but comparatively few exchanges were made under that; they were both general mortgages in one sense but they were both covered by the general mortgage of 1889.

Q. Do these mortgages upon the Dakota lines cover the equipment? A. They cover the equipment in part; some of them specify a certain amount of equipment shall be added to the security, but not intended to be the full equipment of the line.

Q. I understand you to say that a certain portion of the system had two tracks? A. Yes, sir.

Q. Can you state the lines that have the two tracks, and about the mileage? A. The line from Chicago to Milwaukee is a double track and the line from Chicago to the Mississippi river on what we call our Council Bluffs division, is double track with the exception of about thirty-five miles; there is in the neighborhood of about 200 miles.

Q. Have you in your account of cost of road and equipment any subdivision showing the investment in Chicago and Milwaukee terminals? A. We have not.

Q. Or showing the investments in suburban roads connected with the Chicago lines? A. No, sir.

Q. Have you any account or sub-account which would show the equipment designed or used in suburban service? A. No, sir.

Q. I will ask you, Mr. Winne, if at any time there have been any entries made in this cost of road account on account of the appreciation of any of the property owned by the company such as Chicago terminals? A. No, sir.

Q. I notice in your reports an account designated "Renewal account or renewal fund, $602,575.73; how did that fund originate? A. That fund originates by charging to operating expenses of the road, money which should have been expended in the maintenance of the property which was not convenient to expend at that time.

Q. So, then you have a system by which a certain portion of the earnings are set aside for renewals? A. It is their idea to thoroughly maintain the property and to make each year bear its proper proportion; if the money has not been actually expended, it is set aside to be expended afterwards.

Q. As a renewal fund? A. As a renewal fund.

Q. Is that subdivided so that a certain portion of it is for maintenance of road, and a certain portion for equipment? A. It will be so divided, but nothing has been done with it yet.

Q. Is that fund supplied from the earnings by any designated per cent. of the earnings or is a designated amount set aside arbitrarily? A. It is arbitrarily set aside.

Q. Just whatever the officers think might be needed? A. Yes, sir.

Q. May I ask you, Mr. Winne, in this connection, if a station should be discontinued, would the construction account or cost of road, be affected in anyway by that fact? A. No, sir.

Q. The item would not be entered if a discontinued station were destroyed? A. In that event the cost of road would receive credit for it.

Q. It would be credited to the original cost? A. Yes, sir, it would be credited on the original cost as nearly as it would be possible to ascertain it.

Q. I understand you to say you have a steel rail account? A. Well, we have not such an account by such a name; it goes in with our stock of material.

Q. That is, you have not a separate or designated account? A. No, sir.

Q. That is, a distinct account? A. We have not a separate or distinct account, no.

Q. Have you a sub-account in the cost of road account showing expenditures for right of way? A. We have such an account for a portion of the time, that is, with roads which we acquired by purchase, there is no separate account of right of way. In roads we have constructed the right of way has been charged in with everything else as cost of the line, but of course it can be picked out.

Q. You have no account from which you could secure that information except to pick it out of the general items? A. No, sir.

Q. Mr. Winne, is not it a fact that the track on the portions of the system where heavy traffic has developed, such as between Chicago and Milwaukee, improvements have been made such as the laying of much heavier rail and

other improvements necessary to carry on heavy traffic? A. I believe that is so; yes, sir.

Q. Do you know about the weight of rail ordinarily used in the construction of these lines? A. Not from my own knowledge; no, sir.

Q. Now, let me ask you, Mr. Winne, in this improvement, suppose a ton of rails weighing less than sixty pounds per yard were taken up and a ton of rails weighing something like ninety pounds to the yard were put in its place, would there be anything in this transaction that would affect the cost of road account? A. No, sir.

Q. Mr. Winne, if an engine costing $10,000 in 1880 was destroyed, and its place was supplied at the present time by an engine costing exactly the same amount, would there be anything in this transaction which would affect your cost of road and equipment account? A. There would not.

Q. And the fact that the engine purchased to-day is a modern engine and more valuable in point of fact, it would have no influence upon your cost of road and equipment account? A. No, sir.

Q. Mr. Winne, can you ascertain from your office, what amount of the roads constructed in South Dakota were laid with what you designate as old rails? A. Yes, an analysis of the accounts will disclose that, if any.

Q. I would like to have that statement. A. It is a work of time.

Whereupon the further examination of Mr. Winne was continued to Thursday, January 20, 1898, to be resumed at the same place at the hour of 10 o'clock in the forenoon of said day.

January 20, 1898, 10 o'clock a. m.

Mr. Peck: Witness desires to add immediately following his answer to the question asked yesterday, " Was that purposely done or is it merely a coincidence," the following:

The close relation between the cost of property on the one hand and amount of stock and bonds on the other is natural and inevitable—for the reason that any excess of earnings over operating expenses including taxes and fixed charges, which should go to the owners of the property in the form of dividends on stock, may not properly be used for the acquiring of additional property by construction, purchase or other manner.

If it becomes necessary to construct or purchase such additional property, the funds may be used from the earnings in the first instance and cost of property charged with amount of expenditures. The amount so expended would, subsequently, be replaced in the treasury through the sale of bonds or stock covering the amount of additional property, and the natural balance between cost of property and bonds and stock maintained."

January 20, 1898, 10 o'clock a. m.

Cross-Examination of W. N. D. Winne continued by Mr. Null.

Q. Mr. Winne, in the construction of South Dakota lines, was there a considerable portion of the lines constructed under what is known as the Patterson Extension? A. Yes, sir.

Q. And have you in your office a distinct account of the cost of the construction of that extension? A. Yes, sir.

Q. What particular lines in South Dakota were constructed

under the construction known as the Patterson Extension? A. Pattersonville Extension it is called. The account of the Pattersonville Extension includes the construction of the line from Pattersonville, now called Hull, in Iowa, to Chamberlain on the Missouri and also the line from Marion Junction to Running Water on the Missouri.

Q. And was the cost of constructing that extension kept in a separate, distinct account until about the end of the year, or the construction of the extension, and then charged in a lump sum to cost of road and equipment? A. It was so kept.

Q. And can you furnish us with a detailed account of that construction, as shown by the books of your office? A. I can, sir.

Mr. Null: I would like to have it and, when produced, offered as a part of the cross-examination of the witness.

Q. About what is the total mortgage indebtedness upon the South Dakota lines? A. It is in the neighborhood of $17,500 per mile.

Q. A mile? A. A mile, yes, sir.

Q. Have you any data which will give us the actual amount at hand? A. Yes, sir, $17,587.82 per mile.

Q. And what is the total for the South Dakota lines? A. The total for the South Dakota lines is $19,365,247.16.

Q. In round figures, $20,000,000 very close? A. (Not answered).

Q. Were those bonds sold for money? A. They were sold for money, yes, sir; in cases where the lines were constructed by the company.

Q. Do you know about the amount of cash that was realized from the sale of those bonds? A. I cannot state.

Q. Do you know at about the rate they were sold? A. I cannot state from memory.

Q. Do you know whether they were sold for less than par? A. I know that in the Iowa and Dakota Extension the bonds for the construction of the line from Pattersonville to the Missouri, the sales were from 90 cents to par, and a little over.

Q. Mr. Winne, where would the item be entered in case the bonds were sold for less than par? Where would you enter the discount? A. The discount would necessarily be charged to the cost of the property.

Q. So that this $212,000,000 odd dollars, cost of road and equipment, contains whatever discount the company has suffered in the sale of its bonds? A. Yes.

Cross-Examination by Mr. Temple.

Q. Mr. Winne, you explained to us the other day how your accounts were made up. That is, how you arrived at the gross earnings of the system per month, we will say, stating that it was based, in part, upon the report of forwarding and receiving agents, reports of passenger tickets sold, reports of conductors of cash collected, and, I understand, the reports of agen[illegible] connecting lines? A. Yes, sir.

Q. Mr. Winne, in giving the gross earnings and operating expenses in South Dakota for the years 1894 and 1895, upon what basis do you divide the operating expenses? A. On the basis of train mileage.

Q. This resolution of the National Board of Railway Commissioners had not been passed at that time? A. No, sir.

Q. The resolution you testified to yesterday? A. No, sir, I believe not.

Q. Still you say you apportioned the operating expenses on the basis of train mileage? A. Yes, sir.

Q. Revenue train mileage? A. Yes, sir.

Q. Did you use that basis in the report which your company made to the State of South Dakota for this year? A. Yes.

Q. Were the expenses localized for this year. A. No, sir.

Q. And the actual expenses charged to South Dakota? A. No, sir.

Q. Explain to us more fully about this National Board of Railway Commissioners. Of whom is it composed? A. All my information is derived from the report of their proceedings, which is a public document, showing the commissioners who are in attendance and their proceedings in full.

Q. It is not a board or an association created by law? A. No, sir.

Q. It is purely a voluntary association or convention? A. Yes, sir.

Q. And the resolutions of that board have no binding effect on your road or any other road? A. No, sir: we are very glad, however, to receive suggestions from them as to the manner they decide is best for arriving at desired information.

Q. Now, Mr. Winne, I observe that this resolution to which we are referring recommends that the railroads shall apportion to each state on a mileage basis, its proportion of cost of road and equipment, stock, debts, and its proportion of fixed charges, then the operating expenses of each state shall be apportioned on the following basis: Each state to be credited with all business originating, terminat-

ing and carried entirely within said state, and its mileage proportion of all inter-state business. The income from other sources than transportation to be divided on a mileage basis, and operating expenses to be charged to each on the train mileage in each state. You have said that in the statement which you have furnished us, that in dividing the operating expenses and earnings you have used the revenue train mileage? A. Yes.

Q. The term revenue train mileage is not used in this resolution. How do you know what sort of mileage was referred to? A. I have taken it for granted "train mileage" means miles which are made in doing the business of the company, transportation of persons and property.

Q. Where this convention used the word "mileage" in reference to the division of the cost of road and equipment, what does that mean? A. That means the miles of road.

Q. Actual miles of road? A. Yes, sir.

Q. When it uses the term "mileage" in reference to division of earnings, what does it mean? A. It means the miles of road.

Q. The actual miles of road? A. The miles of road over which the freight or passenger has been hauled.

Q. And when the convention uses the word "mileage," in relation to division of income from scources other than transportation, it means? A. Actual miles of road.

Q. And when it uses the expression "train mileage" with reference to an apportionment of the operating expenses? A. It means train mileage, miles made by trains.

Q. And you supply the word "revenue"? A. Yes, sir; because that has been our rule and system in making averages for our own use.

Q. The terms "train mileage" and "locomotive mileage" then have a different signification? A. Yes, sir.

Q. Will you explain the difference? A. I do not know that I can explain more definitely. I can only explain that total locomotive mileage means the total mileage run by the locomotives in service during any stated period.

Q. Whether hauling trains or not? A. Hauling trains.

Q. Then there is no difference between train mileage and locomotive mileage? A. Locomotive mileage as made up includes an estimate for switching locomotives, yard engines, which are estimated to run about six miles an hour.

Q. You run smaller trains in South Dakota than you do in Illinois, for instance, as a rule? A. I presume so.

Q. They have fewer cars per train? A. That I cannot testify to, from my personal knowledge, but perhaps that may be so.

Q. That is your impression, is it not? A. I should say there may be fewer in Dakota than in Illinois, but probably not fewer than the general average on the entire system.

Q. Can you run a small train as cheap as a large one? A. Not materially cheaper.

Q. When you run large passenger vestibule trains with sleeping cars and dining cars, your crew is larger, the train is more expensive? A. Yes, sir; I was thinking of freight trains more particularly.

Q. In apportioning the earnings and operating expenses to South Dakota you have adopted the basis of division recommended by the National Board of Railroad Commissioners, because you think it is fair? A. I think it is fair. It is certainly fairer than the general average per mile of road.

Q. But other railway companies than your own have not

generally adopted the same basis of division, have they? A. I cannot answer that; I do not know what the other roads are doing. I am sure I know I attempted to furnish the information the commissioners desired.

Q. Coming to the cost of the road and equipments, you have no personal knowledge of the amount of capital invested in your road, except so far as the books disclose? A. That is all.

Q. Do you know what was the consideration for the stock issued by your road, that is, was it sold for in cash or what does it represent? A. I know a portion of it was sold for cash. How much, I could not state.

Q. You do not know whether all was or not? A. I know all was not.

Q. That portion that was sold for cash was probably not sold at par? A. I think it would not vary much from par. Some sold at a premium, and some at a discount.

Q. Is the cost of your terminals included in your estimate covering cost of road and equipment, given in your testimony? A. Yes, sir.

Q. Can you separate the cost of the terminals from the remaining cost of the road and equipments? A. I cannot do that for the reason that a portion of our terminals come to us in the purchase of property as an entirety.

Q. And how do you arrive at the cost of road and equipment for South Dakota? A. I have not arrived at it.

Q. You have not given that? A. No, sir.

Q. You have done so in the annual report you made to the state? A. I stated the cost of the road on the proportional basis of miles of road. It is nowhere reported as the actual cost of the lines in Dakota. That is my recollection. A copy of the report will say whether I am right or not.

Q. On page 49 of your annual report to the South Dakota Railroad Commissioners for the year ending June 30, 1897, you show an increase in stock and bonds owned by the company, an increase of $1,369,660 for the year ending June 30, 1897. How was that increase of stock and bonds acquired? A. I have no recollection of such an increase. (Witness examines paper.) That means the mortgage bonds of the St. Paul Company, which were issued and placed in the treasury to replace funds which had been spent during the year in construction and improvements.

Q. Money spent from the earnings of the road? A. Money spent from the earnings of the road.

Q. I also observe on pages 37 and 39 in your annual report to the Railroad Commission of South Dakota, for the year ending June 30, 1897, a list of railway stock and other stock and bonds owned by the Milwaukee Company? A. Yes, sir.

Q. Do you know from what sources those holdings were acquired? A. Actual investments of money in most cases.

Q. I mean how; was the money derived from the earnings of the road? A. From the earnings of the road or by issue of the company's stock. I could not state exactly without tracing the matter through the books.

Q. We take for instance the Braceville Coal Company. What is that and where is it loctaed? A. It is located at Braceville, on the Chicago and Alton Road, about sixty miles from Chicago.

Q. Is it being operated? A. Yes, sir.

Q. And has an earning capacity? A. No, sir. It supplies coal for the operation of the St. Paul Company.

Q. And is used for that purpose alone? A. Yes, sir; supplies coal to the St. Paul Company at cost.

Q. At cost? A. Yes, sir.

Q. And how about the Excelsior Coal Company? A. That property is located in the vicinity of Oskaloosa, Iowa, and is operated on the same plan.

Q. The St. Paul Union Depot Company? A. That represents our terminals in St. Paul, passenger terminals.

Q. What is the capital stock of that company, do you know? A. I do not remember now.

Q. This report shows you own $43,750, of the stock? A. There are seven or eight proprietors in equal ownership.

Q. Can you ascertain and tell me the capital stock of that company? A. I can, sir.

Q. Who are the directors of that concern? A. I cannot state.

Q. What is the Merrill Boom Company? A. It represents an investment at Merrill on Wisconsin river, dam, booms and facilities for conveying logs to the various interests, saw mills, and so on.

Q. Is that being operated now? A. It is, yes, sir.

Q. How long has it been operated, do you know? A. For a long term of years.

Q. That is an incorporation, I suppose? A. Yes, sir.

Q. Has it some earning capacity? A. Well, it is not intended to earn anything above its expenses. It is simply to produce freight for the St. Paul Company, facilitate the handling of logs, and their manufacture into lumber.

Q. Simply operated in connection with the Milwaukee Railroad Company? A. As a separate company organization.

Q. What is done with its revenue? A. Well, that I can

not tell you, sir. I have not the books of that company. It is a separate company.

Q. I presume it does derive some revenue from its business? A. I should say it does, but I say I do not think it is intended to make any earnings out of it.

Q. And here is the Tomahawk Land and Boom Company. What is that? A. That is the same.

Q. Coming to the St. Paul Warehouse and Elevator Company? A. When you get another report that item will not appear in it. It will be charged off to profit and loss in the meantime.

Q. Why is that, Mr. Winne? A. The elevator was destroyed by fire.

Q. Since this report? A. I am not sure whether it is since that report or not. The property was virtually wiped out.

Q. I observe in this report you show an income from this company of $856.25 for the year ending June 30, 1897. A. I expect that comes from the sale of some material or something of that nature. I can tell you exactly what it was.

Q. Here is the Council Bluffs Union Elevator Company, $46,700 worth of stock. Where is that located? A. I do not know anything about that property. I presume it is at Council Bluffs. We have no revenue from it.

Q. Is it being operated? A. I don't know.

Q. The Milwaukee Land Company, you own $61,000 stock in that concern? A. Yes, sir.

Q. Is that a live enterprise now? A. Yes, sir.

Q. Do you receive any revenue from its business? A. Milwaukee Land Company was organized to hold land which the company had acquired which was not needed for railway

purposes and because the company could not hold such land it was transferred.

Q. What business does it do? A. Sells lands which are not required for use by the railway company.

Q. What lands are those? A. None in South Dakota.

Q. Anywhere? A. Some in Iowa, some in Wisconsin.

Q. How does the company acquire those lands? A. Acquired them by purchase. It acquired them and afterwards found they were not necessary for railway purposes.

Q. And this concern, the Milwaukee Land Company, is engaged in selling these lands? A. Yes, sir.

Q. The Milwaukee Industrial Exposition? A. That is stock we subscribed for the exposition in Milwaukee. The corporation is still in existence. The stock may be worth something, but more likely not.

Q. It does not yield any annual revenue, I suppose? A. No, sir.

Q. Your report on page 39 shows $112,000 worth of stock of the Minneapolis Transfer Railway Company. That is a live concern, I believe? A. Yes, sir.

Q. And revenue earning? A. No, sir; it is not. It is a freight terminal property located between St. Paul and Minneapolis, where all the roads have a joint transfer.

Q. It has no earning capacity? A. It has some earnings there, I think, from the stock yards in connection with it, but not sufficient to pay the interest, and the roads have to contribute each year to the deficiency.

Q. How did your company for the year ending June 30, 1897, derive an income to the amount of $1,170.41 from it? A. Because we had previously paid into the company and charged to other accounts the deficiency, which enabled them to pay the interest on their bonds.

Q. What was the object of doing that, Mr. Winne? A. The object was to pay the interest on the bonds.

Q. You have also $75,000 in the Minnesota and Eastern Railway Company? A. Yes, sir.

Q. Is that revenue earning? A. That is revenue earning.

Q. That is a corporation managed by a board of directors I suppose? A. Yes, sir.

Q. You do not know anything about the management of it yourself? A. I do not, no.

Q. You do not know whether it is economically or properly managed, or whether you get your legitimate share of revenue? You know nothing about it? A. I know nothing about it of my own knowledge.

Q. I also see you own $21,000 bonds of the City of Ottumwa, Iowa. What does that mean? A. That is aid voted to the road at the time of that extension into that territory.

Q. And $15,000 worth of bonds of New Lisbon, Wisconsin? A. That is aid voted our extension.

Q. $10,000 bonds of the Village of Flandreau, South Dakota? A. The same.

Q. $8,500 bonds of the Town of Ortonville, Minnesota? A. The same.

Q. $5,000 of the Town of Graceville, Minnesota? A. The same.

Q. $1,000 bonds of Tarah, Minnesota? A. The same. The Flandreau bonds have been, I think, repudiated.

Q. Do those bonds at all enter into your construction account? A. No, sir.

Q. They do not appear as a credit? A. The value of the

bonds has been credited to the cost of the various properties for which they were issued.

Q. You are certain of that fact, are you? A. Yes, sir.

Q. Mr. Winne, is your railroad interested in other associated enterprises aside from those shown in your annual report for 1897 to the State of South Dakota? A. No, sir.

Q. Any coal mines, iron mines or elevators? A. No, sir; only what is shown in the report.

Q. Any banks? A. No, sir.

Q. As a matter of fact, Mr. Winne, the operating expenses of any railroad can be largely localized. By that I mean the actual expenses can be ascertained up to a large per cent. Is not that true? A. Well, to a certain extent. I would not call it to a large extent. The maintenance of way can be localized, of course, exactly, but there is a large part that cannot be localized, repairs to equipment, administration expenses and so on.

Q. Taxes paid in South Dakota, I mean the taxes charged to South Dakota, are the taxes actually paid in that state? A. Taxes actually paid, yes, sir.

Q. Then the taxes paid on your entire system are not apportioned between the states? A. No, sir.

Q. Each state is charged with the actual taxes paid in that state? A. Yes, sir.

Q. That is included in the operating expenses? A. Yes, sir.

Q. On page 51 of your annual report to the State of South Dakota, for 1897, there appears a replacement fund $431,532 for that year, and renewal fund $607,575.73. Will you explain the object of carrying those funds? A. It is our practice, referring now to the rolling stock replacement fund, to charge

to expenses each month the cars that are wrecked, worn out, or otherwise destroyed, cost of their replacement with new cars. That amount is transferred to the rolling stock replacement fund when the new cars are actually built or purchased. The cost is charged against this fund, so that each year's loss of rolling stock is provided for. In regard to renewal, that is a fund that has been charged to expenses from time to time. It is considered necessary for maintaining the road, but it has not been convenient to expend it within that time and is to be hereafter expended on the property in order to bring each year's operation where it should be.

Q. Do I understand each year you set aside a certain amount for this replacement fund and this renewal fund? A. Yes, sir.

Q. Have you any method, any rules by which you fix these funds? A. The method is fixed as far as the rolling stock is concerned. You understand each month cars are dropped from our equipment and their replacement is provided for.

Q. Mr. Winne, what was the rule for separating those items which you charged to operating expenses and those which you charged to cost of construction and equipment? Just where do you draw the line? A. That is rather a difficult question to answer, Mr. Temple. Any particular item of expense you can refer to?

Q. Well, take rolling stock for instance? A. Well, all rolling stock acquired by purchase or construction, if it is purchased or constructed to replace a car or locomotive which has been destroyed, it is charged to expenses or one of these funds which is created for that purpose. If it is a new locomotive or car in addition to what we have had, then it is property.

Q. You explained to us, I believe, the method by which you ascertain the gross earnings and operating expenses of the road, stating that your accounts were made up from the reports of your own forwarding and receiving agents, reports of conductors and reports of agents of connecting lines. Have you got those reports? A. Yes, sir.

Q. For instance, Mr. Winne, you receive from your agent a monthly report of the local tickets sold at that station? A. Yes, sir.

Q. You have such a report with you in court here? A. Yes, sir. I have the report of the Sioux Falls station for the month of November, 1897.

Q. I observe that your tickets are divided into classes according to form? A. Yes, sir.

Q. Local tickets, first class, form "B," special limited first class, form "B 1"; special limited, second class, form "B 2;" round trip ticket, form "R. T." and so on. The rate of fare is different for each of those different forms of tickets, is it not? A. I believe so.

Q. The rates are different? A. I have no personal knowledge of the details of this matter.

Q. Well, you have as much personal knowledge of the details of this matter as the other matters to which you have testified, have you not? A. No, sir.

Q. To some of the other matters at least. You have as much personal knowledge of the details of this as some of the other matters you have testified to from your books? A. I can answer, I think.

Q. What is the rate per mile charged in South Dakota, for instance, for a ticket designated here as form B, that is, local ticket, first class? A. I think it is 4 cents. I should

have to refer to our accouts. I do not carry those figures in my head.

Q. Then will you refer to your books and tell me after dinner what rate is charged per mile for the different forms of tickets indicated here? A. I will, sir.

Q. Mr. Winne, I believe you also issue a number of annual and trip passes, do you not, over your lines? A. I believe they are issued, I have no personal knowledge. Yes, I know the passes are issued to employes.

Mr. Peck: Objected to as incompetent, immaterial and not proper cross-examination.

Q. What sort of a record do you keep of the free transportation issued by your system? A. None whatever.

Q. No record of the annuals? A. I have no record of the annuals.

Q. Does anybody? A. I suppose there is.

Q. Where is it kept, Mr. Winne?

(Question not answered.)

Mr. Peck: All this goes in under objection. It is not cross-examination of Mr. Winne.

Mr. Temple: It all goes in under objection.

Q. You say you presume there is such a record kept? A. I presume there is such a record kept; yes, sir.

Q. Do you know where it is kept? A. I do not.

Q. It is kept by somebody connected with your railway system? A. If there is such a record it would undoubtedly be kept by some one connected with the system.

Q. Will you tell us all you know about this record, Mr Winne? A. I do not keep any records of passes.

Q. Now, I want to get at how you apportion to South Da-

kota her share of earnings from your express business, Mr. Winne? A. Our express earnings reach us in a form of a gross sum of money covering the express privileges on all the lines, and we have no details at all of the business done, and in order to make that apportionment, I applied to the express company to give me an idea or a close approximation of the different lines of road, that is, the relative amount, of business done on each line, and they did so, and from that I established a percentage.

Q. A percentage without reference to mileage? A. No, sir; so much a mile. They furnished me with the relative value of the business, so much a mile, that is to say, the business between here and St. Paul is worth $50 a mile—

Q. That is $50 a mile for a month? A. For any period as long as it is relative, what one line is worth compared with another.

Q. $50 a mile, does that mean the actual mileage? A. If the whole business amounted to $100, the La Crosse division might be entitled to fifteen per cent. and other divisions ten per cent. and so on until the whole $100 was divided over the lines, on the business done by the company.

Q. How do they arrive at it? A. They get detailed reports of the business done, showing the express forwarded from one point to all other points. Of course they can tell what the line from McGregor to Minneapolis is worth as compared with the line to St. Paul.

Q. In case you had an article of merchandise to send from Sioux Falls to Chicago, the express company would have to apportion that business, would it not, between the states? A. Yes, sir; in order to get at it accurately.

Q. So this report it makes to you, or this statement is not based upon the actual fact but is based in part upon

an apportionment? A. Yes, sir; I applied to them to give me the relative value of business on different lines.

Q. Now, in ascertaining South Dakota's share of express business, do you know what basis of apportionment the express company employs? A. Only if they complied with my request they made a percentage based upon the relative importance of the lines.

Q. Who fixes the relative importance of the lines, you or the express company? A. The express company. I have no means of fixing it.

Q. How often have they furnished that statement? A. Once.

Q. When did they furnish that statement? A. I think a year or two years ago. I do not remember which.

Q. What period of time did it cover? A. I don't know. I presume a month or so previous to the time I asked for the information.

Q. Could you produce that statement conveniently? A. I do not know, sir. I do not know whether it has been preserved or not, but I will see.

Q. You stated, I believe, that the mail earnings from South Dakota are arrived at on an actual basis, is that correct? A. On an actual basis, yes, sir.

Q. Will you explain exactly how that is done, how that is arrived at? A. Is not this a matter of repetition?

Q. No, I do not think so. You only stated in a general way. A. The mails are carried under contract with the government at a certain sum per mile per annum, which rate is fixed by the weight of the mail. The mails are weighed once in four years and the average carried over the entire route for thirty days is arrived at, and that fixes the

price for the succeeding four years. For instance we have a contract for carrying the mails from Chalmer to Chamberlain at so much per mile, and which is paid to us quarterly by the government. The rate is fixed, therefore, taking the total number of miles in Dakota and applying that rate to it, give the total mail earnings in Dakota on that line.

Q. Then your mail contracts with the government relating to your South Dakota lines are all local to that state? A. No, sir; they are inter-state, some of them, if I am not mistaken.

Q. Inter-state? A. Yes, sir, some of them; they are not necessarily confined to Dakota or to any state.

Q. Then it is not strictly true that the mails credited to South Dakota shows the actual earnings of that state? A. Yes, sir; because I arrive at that by taking the actual miles the road runs through the state. By taking the Dakota mileage and applying this rate it gives the amount earned by that line in Dakota.

Q. That is by apportionment? A. No, sir; it is so much for each mile of road.

Q. Do you know what your mail earnings for South Dakota were for the year ending June 30, 1897? A. Yes, sir.

Q. How much? A. $123,248.57, according to this report I have before me.

Q. Is that report correct? A. It is supposed to be correct, errors and omissions excepted.

Q. What would the mail earnings per mile of your South Dakota lines be? A. The mail contracts are not based upon the actual miles of road; they sometimes cover the distance from post office to post office, therefore I could not tell it exactly. I could tell the miles in Dakota and give the average.

Q. Will you tell me your earnings on business both originating and terminating in South Dakota and carried entirely within that state and on business either originating or terminating within the State of South Dakota? A. For what period?

Q. Both passenger and freight business separately for, well, the four years you have named here, 1894, 1895, 1896 and 1897? A. I will have to see those exhibits.

(Witness examines papers.) The gross earnings from all sources in the State of South Dakota for the four years ending June 30, 1897, is that the question?

Q. No, sir. We are not asking about this approximation. I want the gross earnings on the purely local business, give me the gross earnings on your freight business that is purely local, that is, beginning and ending within the state? A. For the four years separate or together?

Q. Separate? A. The gross freight earnings for the year ending June 30, 1894, were $137,459.88; for the year ending June 30, 1895, $121,442; for the year ending June 30, 1896, $110,432.45; for the year ending June 30, 1897, $102,289.23.

Q. Now, can you give me the number of tons of local freight carried in South Dakota? A. No, sir.

Q. Can you from your records? A. It can be made from our records, yes, sir.

Q. I should like to have it done, if you will, and also the number of tons of freight carried one mile in South Dakota, that is, local freight for each of those four years? A. That, you understand, will be an immense amount of labor.

Q. I see you figured it out for the stockholders? A. That is different. That was the whole system.

Q. Also the number of passengers carried over your lines

in South Dakota for one mile? A. We have the basis for the information, but it would take an enormous amount of work to prepare it.

Q. I should like to have the number of passengers carried over your lines in South Dakota for one mile between points both of which lie within that state. I would like that information for the four years you have testified to? Mr. Winne, can you give me to-day the gross earnings on business either originating or terminating in the State of South Dakota for the four years mentioned? A. The gross freight earnings?

Q. Inter-state business. Have you that information at hand? A. For the year ending June 30, 1894, they were $1,006,105.62.

Q. Taking for illustration the month of September, 1897, I will ask you if you can tell me the gross earnings of your system on inter-state freight business originating in the State of South Dakota for that month? A. Yes, sir.

Q. What is it? A. I have not got it here. It will have to be obtained from the records.

(Question read to witness.)

A. Yes, sir; I can get that. I do not know whether it is made, but if not, it can be.

Q. Now, taking the month of September, 1897, for illustration, will you tell me the gross earnings upon the purely local freight hauled over your lines in the State of South Dakota? A. $12,245.57.

Q. Now, the gross earnings of your system for the same month on interstate freight originating in the State of South Dakota? A. $244,433.97.

Q. Now, the gross earnings of your entire system for the

same month on interstate freight consigned to points, within the State of South Dakota? A. $168,173.16.

Q. Can you give me the gross earnings for the same month on your passenger business for the State of South Dakota. I mean purely state business as distinguished from inter-state? A. I cannot.

Q. Can you give me the information called for by the last question without much labor or trouble? A. Yes, sir.

Q. I will ask you to do that after dinner if it can be done to-day or to-morrow. Can you give me the gross earnings of your system from passengers going from points in the State of South Dakota to points outside the state, and from points outside the state to points within the State of South Dakota, for the month of September, 1897? A. No, sir; I have no such statement.

Q. Can you give me the amount received from tickets sold at your stations in South Dakota during the month of September, 1897? A. I can give you the ticket sales and cash fares in one item.

Q. What is that? A. $47,066.72.

Q. That does not include the tickets sold outside the state to passengers going into the State of South Dakota? A. No, sir.

Q. Could you give me that information from your books? A. That can be obtained; yes, sir.

Adjourned to 2 o'clock p. m. this day.

2 o'clock p. m.

W. N. D. WINNE, recalled for further cross-examination by Mr. Temple, testified as follows:

Q. Mr. Winne, in giving the earnings for your entire system for South Dakota, I believe you have not gone back of 1894? A. I think not.

Q. Back of the year ending June 30, 1894? A. I believe not.

Q. Is it not a fact that the years 1892 and 1893 for instance were better years, more profitable for your railroad than the years since that time?

Mr. Peck: I object to that as immaterial and incompetent and not cross-examination.

A. The earnings of the road in South Dakota are made up for each year since we have had any lines in South Dakota, and for each other state in the same manner.

Q. That does not answer my question? A. I cannot state.

Q. Coming back to the question of tickets, are you able now to state the rate charged per mile for that class of passenger tickets shown in your accounts as "local book first class, form B"? A. Yes, sir.

Q. What is it? A. 4 cents.

Q. Per mile? A. Per mile, yes, sir.

Q. "Special limited, first class B 1"? A. There are no sales of those; I have not a memorandum of those.

Q. And "special limited, second class B 2"? A. No sales of those.

Q. "Round trip"? A. "Round trip" at 3 cents per mile.

Q. And "one-half"? A. "Half" would be 2 cents a mile.

Q. "Clergymen"? A. To clergymen, we charge them half rate, 2 cents a mile.

Q. Theatrical and parties? A. A party of ten, 2½ cents per mile; a party of twenty, 2 cents per mile.

Q. "Reduced fare return"? A. "Reduced fare return," would be one full fare going and one-fifth of 4 cents per mile returning.

Q. "Excursion"? A. "Excursions" we charge 1⅛ cents per mile.

Q. I will ask you what the rate of charge per mile is on homeseekers tickets designated "form H. S. 1"? A. I have not that information at present.

Q. And order tickets designated as "form O"? A. I think that is not a ticket in itself; it is an order for a ticket and the rate would be according to the kind of ticket ordered.

Q. This book which you have just handed to me purports to be a full report, a monthly report I suppose it is, a station report of tickets sold at Sioux Falls, South Dakota for the month ending I think it is March 30, 1897; that is the usual form of such reports, is it? A. It is our regular form of report.

Q. In other words, this is the form on which your station agents reports passenger tickets sold at your various ticket offices along your line? A. Yes, sir, it is.

Q. How often are these reports made? A. They are made monthly.

Q. They show the form of tickets sold and the number of miles? A. Not the number of miles.

Q. Well, the stations between which they are sold? A. Yes, sir.

Q. And the number of miles between those stations can be ascertained from other sources? A. Yes, sir.

Q. Does this form of report show inter-state tickets as well as local tickets? A. Yes, sir.

Q. But it does not show anything in regard to free transportation, if any such free transportation is issued? A. No.

Q. In addition to that, you say you get a daily report from your conductors, I believe? A. Yes, sir; the conductor makes a report upon the completion of each trip.

Q. On the completion of each trip? A. Yes, sir.

Q. What do you call that report? A. We call it "conductor's report" for train so and so, for such date.

Q. And what does that report show, Mr. Winne? A. It shows the cash fares collected by the conductor, which are charged to him in the account; it also contains a memorandum of the passengers carried between the different stations through which his train runs.

Q. It shows then the stations between which passengers are carried? A. Yes, sir.

Q. And the form of ticket or transportation used by them? A. Yes, sir.

Q. Whether "round trip," or "half fare," or "excursion," or "mileage"? A. Yes, sir.

Q. Also the cash fares collected by the conductor? A. Yes, sir.

Q. You stated this morning, Mr. Winne, that the actual mail earnings of your lines in South Dakota for the year ending June 30, 1897, was what? A. $123,248.57.

Q. Could you at this time give me figures by which you arrive at that gross amount? A. I can get them in a short time; yes, sir. These figures which I have given as the earnings are the remainder after deducting from the amount fixed by the contracts, any fines which the government may have assessed against us for failure to perform our contract at any time.

Q. And are such fines assessed? A. Yes, sir.

Q. As a matter of fact? A. Oh, yes.

Q. Mr. Winne, I have here a statement furnished us by the post office department of the amount actually paid to the road for the transportation of mails in South Dakota for the year ending June 30, 1897, and it shows a total of $133,-455.27; how do you account for the discrepancy between these figures and yours? A. If that statement was correctly made, the difference could be only explained by fines which have been charged to us. I should like the privilege of comparing this with our books.

Mr. Temple: I think there is no objection to that, Mr. Winne.

Q. Coming back again to the passenger question, can you tell me how many passengers were carried free over your lines in South Dakota for the year ending June 30, 1897?

Mr. Peck: That is objected to, as immaterial and incompetent.

A. I cannot.

Mr. Temple: You keep no record in your office of that? A. No record is kept in my office.

Q. As a matter of fact, your company does issue considerable free transportation, I presume, to persons traveling over your South Dakota lines?

Mr. Peck: All of that is objected to for the reasons given heretofore.

A. I have no knowledge of the amount of free transportation issued, if there is any such transportation.

Q. You know such a thing does exist? A. I know that I have transportation on some of our neighboring lines and I presume other officers have on ours; beyond that, I know nothing about it.

Q. Mr. Winne, referring to Exhibit 1, which is a map of your system of railroad, that map shows that none of your lines extend beyond or west of the Missouri river; is that correct? A. That is correct.

Q. The map shows that one of your terminal points is Kansas City, on the Missouri river, and another is Omaha or Council Bluffs? A. At Council Bluffs by ownership; at Omaha by trackage right.

Q. Your terminal points in North Dakota seem to be Fargo, Harlem and Edgley? A. Yes, sir.

Q. Now, I presume that at these various terminal points you touch other railroads or have track connection with other railroads at these points? A. Yes, sir.

Q. With what roads in North Dakota, for instance, do you have track connections at the terminal points named? A. At Fargo with the Northern Pacific Railway and Great Northern Railway, at Edgley with the Northern Pacific Railway.

Q. With what railroads at Kansas City do you have track connections? A. At Kansas City we have track connections with all lines through the Belt Railway.

Q. Well, what particular lines? A. With the Atchison, Topeka and Santa Fe; the Missouri Pacific; the Kansas City, Fort Scott and Memphis; the Kansas City, Pittsburg, and Gulf, and I do not know how many others.

Q. And at Council Bluffs and Omaha? Your principal connection there is with the Union Pacific, is it not? A. Yes, sir.

Q. So that freight is billed through, that is at these terminal points where you have track connections with these lines you have mentioned, freight is billed through and carried over both systems, is it not? A. Yes, sir.

Q. You keep accounts with those roads? A. Yes, sir.

Q. How often do you exchange accounts, Mr. Winne, with these connecting lines? A. Each month.

Q. And in what form are those accounts kept? A. I have here samples of the forms which I will submit.

Q. Will you please explain them in a general way?

Mr. Peck: I object to that, although we are furnishing the information required.

A. The road receiving the freight renders to the forwarding company a report, showing each way bill received from each point on the line of the forwarding company, and showing the weight, freight charges, advance charges and the amount paid. Those reports are checked with copies of the way-bills and each road is advised of any errors found and the final result is a general summary of all the business interchanged during the month, between those two lines; when the correct amount is arrived at, the divisions furnished by the traffic department are applied to the revenue and it is ascertained how much is due from one to the other, in settlement of the month's business. When that amount is arrived at, it is subject to draft.

Q. Have you brought with you specimen sheets of your account with the Union Pacific for instance, for the month of November, 1897? A. Yes, sir.

Q. Will you identify those sheets and let the stenographer mark them and explain what they are?

Papers consisting of six sheets are here marked for identification by the special examiner as "Exhibit 10 (defendants)."

Q. We will take the book of division sheets, Mr. Winne, and I will ask you to state what that is? What that shows? A. It shows the freights forwarded from Chicago to various points on the Union Pacific road.

Q. That is, points west from here? A. Yes, sir, west from here, during the month of November, 1897, and the freight charges, advances and prepaid, and the proportion of the same accruing to the Union Pacific and the Chicago, Milwaukee and St. Paul roads respectively.

Q. We will take sheet 1, for instance, Mr. Winne, and the first item is a shipment of freight from Chicago to Waterloo, and it shows that the freight amounted to $1.39 and the advances are given as 68 cents; explain what that means? A. The advances are charges that have been paid out by the forwarding line to the line from which they received the freight. It has no bearing as to the division of $1.39 for freight.

Q. I observe that in these division sheets the charges seem to be divided into three columns, entitled, respectively, "Freight," "Advances," "Prepaid." Will you explain these columns and their significance? A. The figures in the freight column represent the charges from Chicago to Waterloo; the amount of advanced charges are the charges which accrued before it reached Chicago on its way to Waterloo, charges that have been paid by the St. Paul Company to the transportation company from which it received it and which must be collected at its final destination. It has no reference to the $1.39, the charges between Chicago

and Waterloo; in other words, this 68 cents is money paid out by the Chicago, Milwaukee and St. Paul Company, which the Union Pacific must collect for the St. Paul Company at the destination of the freight.

Q. It forms no part of the revenue derived by the Chicago, Milwaukee and St. Paul Railway Company or the Union Pacific for this freight? A. No, sir.

Q. And on this first item appearing at the top of sample division sheet No. 1, of the account between the Chicago, Milwaukee and St. Paul Company and the Union Pacific, it appears that the freight charges amount to $1.39? A. Yes, sir.

Q. Now, what proportion of that belongs to the Union Pacific and what proportion belongs to the Chicago, Milwaukee and St. Paul Company? A. It appears that the proportion of the Union Pacific is 36.5 per cent. and the proportion of the Chicago, Milwaukee and St. Paul Company is 63.5 per cent.

Q. Are you able to state how far that article of freight was shipped over your line before it was delivered to the Union Pacific? A. In the neighborhood of 500 miles.

Q. How far was it carried over the Union Pacific? A. I do not know.

Q. Could you approximate it? A. I could not; I can ascertain.

Q. The third item on the sample division sheet No. 1 was a shipment from Chicago to Fremont; is that Fremont, Nebraska? A. I presume, yes, sir.

Q. The freight charges were $98.71 and of that sum what proportion was credited to the Union Pacific? A. 36.5 per cent.

Q. And what proportion to your road? A. 63.5 per cent.

Q. At what point was this consignment of freight delivered to the Union Pacific? A. At Council Bluffs or Omaha.

Q. Mr. Winne, on these sample division sheets Nos. 1 and 2, under the column headed with the character indicating percentage, I notice some figures; will you explain their meaning? A. The figures under the column headed with the sign of per cent. are the figures furnished by the traffic department on which the joint revenue is divided.

Q. On page 1 then, the freight on the first nine shipments seem to be divided on the basis of 36.5 per cent., is that correct? A. That is correct.

Q. And the freight on the remaining items on that page seems to be divided on the basis of 51.5 per cent.? A. That is correct.

Q. That is the per cent. which the Union Pacific receives from this freight charge? A. Yes, sir.

Q. And on sample division sheet No. 2, the freight seems to be divided on the basis of 51.5 per cent.? A. Yes, sir.

Q. To the Union Pacific Company? A. To the Union Pacific Company.

Q. And on the next nine items the freight seems to be divided on the basis of 61.5 per cent. to the Union Pacific Company? A. Yes, sir.

Q. And the next item on the basis of 64.5 per cent.? A. Yes, sir.

Q. Now, Mr. Winne, will you explain how that basis of division was arrived at; how it is fixed? A. I do not know; these divisions are furnished to the accounting department by the traffic department.

Q. That is, your traffic department? A. Our traffic department.

Q. Then your idea is that that percentage of division is the result of an arrangement between the traffic department of your system and the traffic department of the Union Pacific? A. I presume so; it must be agreed upon, of course.

Q. Is that agreement in writing? A. I do not know; I say it is agreed upon because settlements are made upon that basis.

Q. You do not know whether it is in writing or not? A. No, sir.

Q. The sample division sheets which you have shown to us shows the west-bound freight forwarded over your line to the Union Pacific? A. Yes, sir.

Q. We asked you this morning to furnish us also with sample division sheets of east-bound freight sent over the Union Pacific to your line? A. That is so, and I supposed they were here; they are not done yet I suppose.

Q. You will furnish them? A. I will furnish them; yes, sir.

Q. How often are these division sheets furnished, Mr. Winne, monthly? A. No, sir; they are furnished as often as there is a change in the rate.

Q. As often as there is a change in the rate? A. Yes, sir.

Q. How often are these accounts made up? A. Each month.

Q. Then the division sheets would be furnished each month? A. Oh, certainly, on the monthly business; yes, sir.

Q. Then the sheet containing the recapitulation is made up from these division sheets? A. Yes, sir.

Q. And from that, the general account between the two companies, is that right? A. That is right; you see the amount is carried from the recapitulation sheet to the account current.

Q. Now, in the sheet containing the account current, there are also—it is a double sheet and there are four columns on each side of the sheet making eight columns in all? A. Yes, sir.

Q. And those columns are entitled "Freight Charges," "Advance Charges," and "Prepaid." Do I understand that the freight charges includes the gross freight earnings? A. The gross freight earnings.

Q. On these consignments to the two systems, your system and the Union Pacific system? A. Yes, sir.

Q. And the amount placed in the column under "Advance Charges," represents no part of the earnings belonging to either system? A. It represents no part of the earnings, but of course it figures in the settlement of the account, that is to say, the Union Pacific is charged with the amount which they must collect from the consignee for our account, but it has no bearing on the division between the two companies, other than that.

Q. Then, according to the account for November, 1897, between the Chicago, Milwaukee and St. Paul Company and the Union Pacific Company, the gross freight earnings or charges on the west-bound freight through-billed over your lines to the Union Pacific amount to $16,494.39? A. Yes, sir.

Q. And of that sum, what amount belonged to the Chicago, Milwaukee and St. Paul Railway system? A. $7,326.87.

Q. And what amount belonged to the Union Pacific? A. The difference between that sum and $16,494.39.

Q. Now, who collected the charges on these consignments? A. The Union Pacific collected all that was not prepaid.

Q. How is that account kept and the balances struck? A. The amount that is prepaid must be deducted from the amount due us.

Q. In further explanation of the general account between your system and the Union Pacific, I will ask you to explain the writings and figures under the heading "Intermediate Line Haul" beginning with the capitals D. M. N. & W. to Union Pacific; what does that mean? A. That means business neither originating nor terminating with the St. Paul system; it is business that passes over our system destined to points on the Union Pacific.

Q. And hauled over some portion of your line intervening between the points named in the account? A. Yes, sir.

Q. With those exceptions, then, the shipments of freight in this account are shipped entirely over the Chicago, Milwaukee and St. Paul system and the Union Pacific system; is that correct? A. Through way-billed over the Chicago, Milwaukee and St. Paul to the Union Pacific.

Q. The account on the left-hand side of this general balance sheet I am talking about seems to represent the consignments of freight and freight charges on freight forwarded by your line to the Union Pacific? A. Yes, sir.

Q. And for the month of November, 1897, it shows the gross freight earnings to be $16,494.39? A. Yes, sir.

Q. Now, the account on the right-hand side of this same sheet shows the freight shipments and total freight charges on freight received by your line from the Union Pacific? A. Yes, sir.

Q. That would be east-bound freight? A. Yes, sir.

Q. What was the total freight earnings for the month of November, 1897, on these shipments of freight? A. $20,408.60.

Q. What amount belonged to the Union Pacific? A. $9,729.96.

Q. And the difference between that sum and the total sum mentioned, represents the Chicago, Milwaukee and St. Paul Company's proportion of these total freight earnings? A. Yes, sir.

Q. Mr. Winne, these sheets and these accounts which you have produced here are made out in your office, are they not? A. Yes, sir

Q. How did you know on what percentage these earnings are to be divided between your road and the Union Pacific road? A. We are advised by the traffic department of the rates.

Q. Do not they furnish you with a written schedule of these percentages? A. Yes, sir.

Q. Then your traffic department furnishes you, we will say the auditing department, with a written schedule of the percentage or percentages on which the joint freight charges are to be divided between the two lines? A. Yes, sir.

Q. You have such a schedule for the Union Pacific and the Northern Pacific and other connecting lines? A. Yes, sir.

Q. Would you produce those schedules, Mr. Winne, and let us see them? A. Yes, sir; shall I send for them now Mr. Temple?

Mr Temple: We would be glad to have you do so.

Q. I now hand to you Mr. Winne, six sheets of accounts which were prepared by you, and I ask you to explain what they are? Papers marked for identification by the special examiner as "Exhibit 11 (defendants)." A. They are statements showing freights through billed from points on the Chicago, Milwaukee and St. Paul Railway; two specimen sheets and a summary; also an account current showing the settlement of the joint freight business between the two above named companies for the month of October, 1897.

Q. And does the same explanation which you have made with reference to the Union Pacific accounts, apply to this?

Mr. Peck: That is objected to.

A. In every part.

Mr. Temple: I now formally offer in evidence Exhibits 10 and 11.

Mr. Peck: And I formally object to them; they are incompetent and immaterial and it is not proper cross-examination.

Exhibits 10 and 11 (defendants) received.

Mr. Temple: In the specimen sheets in the account between the Milwaukee and Northern Pacific systems I observe that the percentage upon which the freight earnings are divided is not shown upon the account; does that appear in the original account in your office, or was it inadvertently omitted from this? A. No, I think some of the roads show the percentage and some do not; of course the division is a matter of record.

Q. Is there a uniform percentage of division between the Chicago, Milwaukee and St. Paul and the Northern Pacific systems? A. Do you mean uniform charges to all stations?

Q. Yes? A. Oh, no.

Q. It varies as in your transactions with the Union Pacific? A. Yes, sir; the division sheet which I will send for will show to what stations the division applies.

Q. In your sample sheets in the Northern Pacific account in what column is shown the Chicago, Milwaukee and St. Paul Railway Company's proportion of the gross freight earnings or charges? A. It is shown in column headed C. M. & St. P. proportion.

Q. And the Northern Pacific's proportion of those charges? A. That is not shown.

Q. Is not that shown here? A. Not in all cases.

Q. Is it true that the Northern Pacific's proportion of those charges would be the difference between the amount due to the Chicago, Milwaukee and St. Paul Railway Company and the total freight charges? A. Yes, sir.

Q. Shown in the column headed freight? A. Yes, sir.

Q. In your account with the Union Pacific in the division sheets for instance, in what column is the Union Pacific's proportion of the gross earnings or charges shown?

A. It should be shown in the column headed "Union Pacific proportion."

Q. It is so shown? A. I do not know; I have not verified it.

Q. In what column is shown the Chicago, Milwaukee and St. Paul Railway Company's proportion of the total freight charges or earnings? A. That should appear in the column headed "C., M. & St. P. Proportion."

Q. These sample accounts between your system and the Northern Pacific relate exclusively to freight traffic? A. Yes, sir.

Q. Have you similar accounts for the passenger traffic between your system and connecting lines over which through tickets are sold? A. The passenger accounts are made up in the same manner, but they are not as bulky as these; they are in the form of a book; our agents reports of inter-line tickets are entered in the book and the proportion accruing to each line are extended.

Q. Could you furnish us by the morning say, with specimen sheets of the passenger account for the month of November, 1897, between your system and other connecting lines; any two or three of them? A. These same roads, for instance?

Q. Yes? A. Yes, I think so.

Q. Now, upon what basis, Mr. Winne, are the passenger earnings divided between your system and other lines over which through ticktets are sold? A. Well, so far as I am informed about it, the divisions are based as a rule upon the mileage.

Q. The divisions are furnished in the case of passenger business by the general passenger and ticket agent furnish-

ing you with a schedule of the percentages on which the passenger earnings are divided? A. Yes, sir.

Q. On through tickets? A. Yes, sir.

Q. And you have those schedules in your office? A. Yes, sir.

Q. Then we will ask you to produce in the morning the schedules furnished you for the division of freight and passenger earnings between your system and connecting lines over which through passenger tickets are sold, or through freight is carried? A. As we have been working on these two roads I would like to furnish it for those same roads, although it makes no difference.

Mr. Temple: That is all right; we will take these two roads.

Mr. Winne: It makes no difference to me, however.

Mr. Temple: Bring it for these two roads.

Whereupon the further taking of testimony herein was continued to be taken up at the same place at the hour of 10 o'clock a. m., January 21, A. D. 1898.

January 21, 1898, 10 o'clock a. m.

Cross-Examination of W. N. D. Winne continued by Mr. Temple.

Q. Mr. Winne, recurring to Exhibits 10 and 11, they are not originals? A. No, sir.

Q. Are they true and exact copies of the corresponding originals in your office? A. They are.

Q. You also stated on yesterday that you kept account of the through tickets sold over the Chicago, Milwaukee and St. Paul Railway and connecting lines, I believe? A. Yes, sir.

Q. And have you brought with you any of those accounts or copies of them? A. I have.

Q. What have you brought of that nature? A. I have here a copy of the report of tickets sold by the Northern Pacific Railway Company to points on the line of the Chicago, Milwaukee and Paul Railway Company for the month of November, 1897, showing the numbers and number of tickets, the through rates and the proportion accruing to the Chicago, Milwaukee and St. Paul Railway Company.

Paper marked by the special examiner for identification "Exhibit 12*a* (defendants)."

This is a copy of the report of the tickets sold by the Chicago, Milwaukee and St. Paul Raliway Company from points on the Chicago, Milwaukee and St. Paul Railway to points on the Northern Pacific Railway during the month of November, 1897, showing the numbers and number of tickets, the through rate and the proportion accruing to the Northern Pacific Railway Company.

Paper marked by the special examiner, for identification, "Exhibit 12*b* (defendants)."

This is a copy of the report of tickets sold from points on the Union Pacific to points on the Chicago, Milwaukee and St. Paul Railroad, showing the numbers and number of tickets, the through rate and the proportion accruing to the Chicago, Milwaukee & St. Paul Railway Company.

Paper marked by the special examiner, for identification, "Exhibit 12*c* (defendants)."

This is a copy of the report of tickets sold from poins on the Chicago, Milwaukee and St. Paul Railway to points on the Union Pacific Railway for the month of November, 1897,

showing the numbers and number of tickets, and the through rate, and the proportion accruing to the Union Pacific Railway Company

Paper marked by the special examiner, for identification, "Exhibit 12*d*, (defendants)."

Q. These accounts, Mr. Winne, show the station from and to which a through ticket is sold? A. Yes, sir.

Q. In the first two columns headed respectively, with the words "from" and "to"? A. Yes, sir.

Q. That is; the name in the column headed "from" is the station from which the ticket is sold? A. It is the station or the designation of the office.

Q. And the name in the column under the word "to"? A. Shows the destination of the ticket.

Q. What is the meaning of the letter and figure in the three columns under the word "form"? A. That is the destination of the ticket.

Q. And what do the figures represent in the column or double column under the words "through rates"? A. That is the rate at which the tickets are sold; the amount for which the ticket is sold.

Q. What is the meaning of the figures in the double column headed "proportion"? A. That is the proportion accruing to lines upon which the point of destination is located.

Q. And what is the meaning of the figures in the double column headed with the word "amount"? A. That is the amount accruing to the line upon which the point of destination is located.

Q. Mr. Winne, how do you arrive at the basis for a di-

vision of receipts from these through tickets? A. The basis, as a rule—is the mileage basis.

Q. Does that basis obtain in all the instances shown in these accounts contained in Exhibit 12? A. I do not know.

Q. By what authority is that basis fixed or established between these lines? A. When the division is on a mileage basis, I think there is no special authority given us. The authority is given us when the mileage basis is not used, in cases where we are obliged to make different rates by short line competition, and matters of that kind.

Q. Is any particular department of your system charged with fixing the basis for the division of these passenger rates on through tickets? A. The traffic department is in charge of that.

Q. The same department that fixes the percentage for the division of through freight charges? A. Yes, sir.

Q. And have you a schedule or schedules showing the percentage upon which these through tickets are divided? A. Not in schedule form. In case where the mileage basis is not used we would be furnished with a letter of advice. Those letters are scattered through the files, in no one place.

Q. And where the mileage basis is used there is no printed schedule? A. No, sir.

Q. I asked you yesterday to produce a schedule of percentages for dividing through rates over the Milwaukee and connecting systems. Have you brought such schedule with you? A. I have.

Q. What have you brought of that nature? A. This is the schedule of rates of the division upon which we base our settlement of joint business with the Union Pacific Railway Company.

Paper marked by the special examiner for identification, "Exhibit 13 (defendants)".

Q. Turning, Mr. Winne, to the page of Exhibit 13, commencing with the station of Adams in Nebraska and ending with the station of Atkinson in Utah, I observe that opposite the name of each station are two horizontal lines extending across the page, the top line beginning with the word "east" and the bottom line with the word "west" and each followed by a series of figures. Will you explain the meaning of those figures and words? A. Those figures represent the division of the rate, the division of the through rate between the Union Pacific Railway and the Chicago, Milwaukee and St. Paul Railway.

Q. Following the word "east" on the line opposite Adams station, are the figures 38.5, what does that represent? A. Thirty-eight and one-half per cent.

Q. To what line? A. To the line east of Omaha.

Q. And following the word "west" are the figures 61.5? A. That would mean sixty-one and one-half per cent. to be allotted to lines west of Omaha.

Q. Then the designations "east" and "west" in this schedule refer to Omaha, do they? A. Yes, sir.

Q. That is the dividing line? A. Yes, sir, as I understand it

Q What other schedules of percentages for division of through freight rates have you brought with you? A. These, I am informed, are the rates of division on business interchanged with the Northern Pacific Railway Company.

Paper marked by the special examiner for identification, "Exhibit 14 (defendants)".

Q. Mr. Winne, I observe that the schedule of percentages

marked Exhibit 13, took effect November 1, 1890. Is that schedule still in force? A. Yes, sir.

Q. The business between your system, the Chicago, Milwaukee and St. Paul Railway and the Northern Pacific Railway is divided upon the basis of this schedule, is it? A. Yes, sir.

Q. Take this schedule which went into effect November 22, 1897, and turning to the second page of that schedule, what I would call the second page of this schedule, I observe six perpendicular columns, headed " first class," etc. Will you explain the meaning of the figures in this column. (No. answer.)

Q. Now, I hand you, Mr. Winne, a number of letters, which I presume to be copies of letters? A. Yes, sir.

Q. Will you explain what they are? A. These are advices from the traffic department as to the proper division to be made of certain business.

Q. Advices from your traffic department? A. Yes, sir.

Letters marked by the examiner for identification, Exhibits " 15a (defendants)," " 15b (defendants)," " 15c (defendants)," " 15d (defendants)," " 15e (defendants)."

Mr. Temple: The defendants now offer in evidence Exhibits 12a, 12b, 12c, 12d, 13, 14, 15a, 15b, 15c, 15d and 15e. Received.

FOLDOUT(S) IS/ARE TOO LARGE TO BE FILMED

Exhibit 15 *a*.

W. N. D. Winne, General Auditor.
R. S. Dousman, Ass't Gen'l Auditor.
P. Tyrrell, Ticket Auditor.
W. F. Dudley, Freight Auditor.

C. E. Dudley, Auditor of Expenditure.
Jno. J. Moulding, Road Accountant.
W. E. Beecham, Car Accountant.
C. H. Burton, Fuel Accountant.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.
General Auditing Department.
Freight Auditor's Office.

Chicago, Ill., Aug. 23, 1897.

Mr. R. S. Dousman.

D. Sir: Mr. Keeley has made arrangements for division of through rates on stock, cattle and feeders, carloads, from points on the Nor. Pac. Ry. via Edgeley, as follows:

Effective 8/20/97.

From Dickinson, N. D., to Townsend, Mont., inc., also Red Lodge & Saffington to stations on the S. C. & D. Div. north, of & inc. Sioux City and I. & D. Div., Spencer to Mitchell, inclusive.

Cattle: C., M. & St. P. Ry., 13¾c. per 100 Nor. Pac. Bal.
Sheep: " 15.7 " " " " " "

From Dickinson, N. D., to Big Horn, Mont., inc., to Omaha & Co. Bluffs & intermediate points south of Sioux City via Edgeley. Cattle C., M. & St. P. 16c. per cwt. lbs.

Yours truly,

N. J. GOLL,
A. G. F. A.

Copy.

Exhibit 15 *b*.

W. N. D. Winne, General Auditor.
R. S. Dousman, Ass't Gen'l Auditor.
P. Tyrrell, Ticket Auditor.
W. F. Dudley, Freight Auditor.

C. E. Dudley, Auditor of Expenditure.
Jno. J. Moulding, Road Accountant.
W. E. Beecham, Car Accountant.
C. H. Burton, Fuel Accountant.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.
General Auditing Department.
Freight Auditor's Office.

Chicago, Ill., 11/20, 1891.

W. F. Dudley, Esq., F. Aud. Bldg.

D. Sir: Between Co. Bluffs, Omaha, Sioux City & points on C., M. & St. P. Ry. west of the C., St. P., M. & O. line

Sioux to St. Paul, taking Mo. river rates and Pac. coast terminals and points on Nor. Pac. R. R. taking same rates via Edgeley, all business deduct 5 per cwt. before prorating. C., M. & St. P. Ry. pro. 20 % Pac. Coast terminal rates. Nor. Pac. Ry. Balance.

Yours truly,

J. H. HILAND,

Copy. G. F. A.

EXHIBIT 15 *c*.

W. N. D. Winne, General Auditor.
R. S. Dousman, Ass't Gen'l Auditor.
P. Tyrrell, Ticket Auditor.
W. F. Dudley, Freight Auditor.
C. E. Dudley, Auditor of Expenditure.
Jno. J. Moulding, Road Accountant.
W. E. Beecham, Car Accountant.
C. H. Burton, Fuel Accountant.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.
GENERAL AUDITING DEPARTMENT.
FREIGHT AUDITOR'S OFFICE.

Copy. Chicago, Ill., 8/20, 1897.

Mr. R. S. Dousman,

D. Sir: Mr. Keeley has arranged with the Nor. Pac. for tariff on soft coal, car loads from Duluth, Superior & W. Superior to Monango, Duane, Ellendale, Winship, Frederick & Westport via. Edgeley, we to receive 80c. per ton as our proportion.

Effective 8/25/97.

Yours truly,

N. J. GOLL,

Copy A. G. F. A.

EXHIBIT 15 *d*.

W. N. D. Winne, General Auditor.
R. S. Dousman, Ass't Gen'l Auditor.
P. Tyrrell, Ticket Auditor.
W. F. Dudley, Freight Auditor.
C. E. Dudley, Auditor of Expenditure.
Jno. J. Moulding, Road Accountant.
W. E. Beecham, Car Accountant.
C. H. Burton, Fuel Accountant.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.
GENERAL AUDITING DEPARTMENT.
FREIGHT AUDITOR'S OFFICE.

Chicago, Ill., 3/22, 1894.

Mr. W. F. Dudley, Freight Audr.

D. Sir: Referring to the attached copy of our G. F. D. 8790 tariff on lumber from North Pac. Coast points to our Da-

kota stations in connection with the Nor. Pac. I observe that rates are shown to our stations between Edgeley & Aberdeen which are lower than the Missouri river rate basis which governs to other points covered by this tariff, these lower rates are, however, the combination of locals and in settlement of joint account we will accept our local.

Please see, however, that there is no oversight regarding the application of our Mo. river points arbitrary on shipments to intermediate points where the Mo. river rate is applied.

Yours truly,

N. J. GOLL,

Copy. A. G. F. A.

EXHIBIT 15 *e*.

W. N. D. Winne, General Auditor.
R. S. Dousman, Ass't Gen'l Auditor.
P. Tyrrell, Ticket Auditor.
W. F. Dudley, Freight Auditor.
C. E. Dudley, Auditor of Expenditure.
Jno. J. Moulding, Road Accountant.
W. E. Beecham, Car Accountant.
C. H. Burton, Fuel Accountant.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.
GENERAL AUDITING DEPARTMENT.
FREIGHT AUDITOR'S OFFICE.

Chicago, Ill., Oct. 12, 1897.

Mr. R. S. Dousman, Freight Audr.

D. Sir: Referring to attached copies of billing from Dickinson, N. Dak. & Ravalli, Mont., to Spirit Lake, Ia., for 22 cars of cattle. Our proportion on the Dickinson business is 18¾ cents per hundred & on the Ravalli business 18 $\frac{78}{100}$ c. per hundred. Please make settlement accordingly.

Yours truly,

E. S. KEELEY,

Copy. A. G. F. A.

Re-direct Examination by Mr. Kittredge.

Q. Counsel for the defendants presented to you yesterday a statement from the post office department showing money

paid to the company on account of mail carried in South Dakota, and you were to examine your books in regard to that subject? A. The examination is not completed; it is now under way.

Q. You may explain what you have discovered as far as the examination has gone? A. I find the statement submitted to me for examination includes an amount for mail service on the route from Sioux City to Mitchell, as though it was all in the State of South Dakota; whereas some five or six miles are in the State of Iowa. The statement also includes a route to Ellendale, North Dakota, on the James river line, and includes the distance from the state line to Ellendale, in North Dakota, as though it was South Dakota; it also includes compensation for railway postal cars, as though they were run through to Bowdle, whereas the route ends at Aberdeen; it also includes the payment for such railway postal cars as though it was paid for the entire year, whereas it is only for nine and one-half months, and it takes no notice of fines against our company on account of failure of service, on account of snow or water blockades, or other causes.

Q. The statement you gave of the money actually received from the government for such services is actual and correct? A. Actual and correct. It is amount we received less what they charged for failure to perform services.

Q. Have you or has your department any power or authority to make rates, either passenger or freight? A. No, sir.

Q. Or determine the division of earnings made by your company with other connecting companies? A. No, sir.

Q. In regard to the construction account, when rails are taken out and replaced to what account is that item charged?

A. When new rails are put in place of the old rails it is charged to operating expense account, renewal of rails.

Q. Is that statement true in regard to other items of like character taken out or, off the road, and replaced by others? A. Yes, sir.

Q. If additional equipment or material is put into the road or onto the road to what account is that charged? A. To the cost of the property.

Q. Does the capital account as it appears on your book vary from year to year? A. By capital account you mean property account, cost of road and equipment and the working material?

Q. Yes, sir. A. Yes, sir; it does.

Q. You may explain how it varies. A. It varies according to the expenditures that are made on account of additions to the property.

Q. And purely on account of additions? A. Yes, sir.

Q. The general mortgage which you spoke of, that is the mortgage covering the entire system, what part of it is apportioned to South Dakota? A. No part.

Q. It is then a general mortgage covering the entire property of the company? A. Yes, sir.

Q. In South Dakota as well as in other parts of the system? A. Wherever located, the entire property.

Q. Regarding the sale of bonds under the general mortgage, some of them were sold at less than par as I understood your testimony? A. Yes, sir.

Q. Were those bonds placed upon the market, the best possible price secured for them and the proceeds turned into the treasury of the company? A. Yes, sir.

Q. Is the same true of the stock of the company which was issued and for which cash was received? A. Yes, sir.

Q. In your examination, either direct or cross, you made a statement to the effect that not all the stock of the company was sold for cash. You may explain what the fact is in that regard, and if stock was issued and disposed of in acquiring other property, or in exchange for other property. A. As I understand you, you wish to know for what purpose the present outstanding stock was issued?

Q. Yes, sir. A. It appears from this report that 170,840.26 shares of common stock were sold for cash. The amount realized being $16,392,069.05, and that 51,989.17 shares of preferred stock were sold, the amount of cash realized being $5,212,248.80. We also issued 132,235 shares of preferred stock in exchange for bonds. Certain of our early issue of bonds contained a provision that those bonds might be converted into preferred stock within a certain time after the payment of any dividend on the preferred stock, and of course, the holders, as the bonds approached maturity, were anxious to avail themselves of that privilege. And these are the conversions that have been made up to June, 1897.

Q. Was some of the stock of the company now outstanding issued for the purchase of some of the property now owned by the company? A. There were issued for the purchase of stock of other companies, other lines of road, 206,812.09 shares of common stock and 106,324.83 shares of preferred stock. It also appears at some period when the earnings of the company were used in the acquiring of property or construction instead of selling the stock as it was proper to do to reimburse the treasury, the stock itself was issued directly to the stockholders, as a dividend.

Mr. Peck: In lieu of the money that went into the purchase? A. In lieu of the money that went to the purchase or construction of property. That amounts to 82,613.65 shares. That explains the issue of stock.

Q. Have you a statement showing the dividends that have been paid by the company for the last ten years? A. I have an informal statement. It is not made up in formal order.

Q. You may state what dividends have been paid by the company for that period on its stock? A. I have not a statement of the dividends from the beginning. I have a memorandum of the dividends paid in the last ten years.

Q. That is what I asked you? A. The dividend on the preferred stock paid in the year ending June 30, 1888, was six per cent.; year ending June 30, 1889, four and one-half per cent.; for each year since that time, to the year ending June 30, 1897, seven per cent., making an average for ten years of 6.65 per cent. on the preferred stock.

Q. What per cent. does the preferred stock of this company bear? A. The preferred stock of the company is entitled to a dividend of seven per cent. if earned.

Q. Explain what you mean by "if earned"? A. If the earnings of the company have been sufficient to pay its operating expenses, taxes and fixed charges, and there is enough remaining to pay seven per cent. on the preferred stock, the preferred stockholders are entitled to that amount to the exclusion of the common stock.

Q. By what authority is such dividend paid to preferred stockholders? A. The charter of the company.

Q. Have you a statement of the dividends paid to the holders of common stock during the period of ten years last past? A. I have that information; for the year ending June

30, 1888, the common stockholders received a dividend of two and one-half per cent.; for the years ending June 30, 1889, 1890, 1891, they received nothing; for the year ending June 30, 1892, they received two per cent.; for the year ending June 30, 1893, they received four per cent.; for the year ending June 30, 1894, they received four per cent.; for the year ending June 30, 1895, they received two per cent.; for the year ending June 30, 1896, they received four per cent.; for the year ending June 30, 1897, they received five per cent. making a total of twenty-three and one-half per cent. for ten years, an average of 2.35 per cent. per annum.

Q. Mr. Winne, counsel examined you regarding certain property that the company owned stock in, or holds the absolute title to, like coal mines, the Union Depot in St. Paul, and the Union Depot in Chicago, and other places. For what purposes were those properties acquired? A. They were acquired for the purpose of facilitating the business of the company, the transportation of passengers and freight.

Q. Were they necessary to the economical and proper management of the company's property? A. They were absolutely necessary.

Q. I call your attention particularly to the Union Depot in St. Paul. What about the acquisition by the company of its interest in that company? Why did they do it and was it necessary for the proper and economical management of the company's business?

Mr. Null: Object to his giving his opinion and conclusion as to whether it is necessary.

Question withdrawn.

Re-cross Examination by Mr. Null.

Q. Mr. Winne, you said something about the stock and bonds having been sold to the best advantage. Did you personally conduct those transactions? A. I did not.

Q. And it is not properly in your department? A. No, sir.

Q. I notice from your report there, just turn to your page showing stock issued and cash received for stock, stock sold for cash, the figures there indicate a total discount of $678,625.15, would it not? A. Yes, sir.

Q. That, I understand you, is charged to cost of road? A. It would have been so charged no doubt, I have not the record with me.

Q. I will ask you concerning this matter. To what account do you charge interest accruing upon bonds given upon the lines of road during the construction of the road? A. The interest accruing upon the bonds during the period during which there is no earnings, before the road is open for business, would be charged to the cost of that road.

Q. It would be charged to your— You have testified concerning the dividends earned. That does not represent the entire earnings of the company? A. Not the entire earnings, no sir; we are entitled to reserve working capital.

Q. As a matter of fact, at the end of your last fiscal year you had a surplus of $8,509,719.85? A. Yes, sir.

Q. That is correct, is it? A. Yes, sir; that is the balance of income at that time.

Q. That would represent the surplus earnings, the earnings that have not been paid out in the form of dividends? A. Yes, sir; but dividends have been paid out of that for the last year, amounting to about two and a half million.

Q. When was that paid? A. Last October.

Q. And the earnings since June 30, 1897, would have covered that amount, would it not? A. No, sir.

Q. The net earnings? A. No, sir; not above fixed charges; no, sir.

Q. Can you state at the present time, for instance, the 1st of January, 1898, the balance to the credit of this income account? A. I cannot. The accounts for December are not yet closed up.

Re-direct Examination by Mr. Kittredge.

Q. Counsel has inquired in regard to the surplus earnings of the company. You may explain in detail regarding that fund? A. The surplus shown by the balance of income account June 30, 1897, amounts to some eight and one-half million dollars and is the accumulation of what we call undivided income from the formation of the company to this time. Of that amount, some two and one-half million dollars have been divided since this report, being the dividend for the last half of the fiscal year ending June 30, 1897, which dividend was not declared until after the accounts were closed, and in this case the dividend was declared in October, 1897. The balance of the surplus, as I explained, is the growth since 1863, and includes all working capital which all roads must have in order to do business. For instance, we have one million nine hundred and eleven thousand dollars locked up in material, fuel and supplies, for the operation of the road, which is kept constantly on hand; also, provision for purchase of bonds for sinking fund; a large amount has been expended on property from 1863 to this time, for which the treasury could not be reimbursed, and which the earnings account would have to

stand, and which must eventually be taken out of the surplus account.

Q. You have spoken of the working capital or supply account. Explain in detail what that is. Why is it necessary if such is the fact, for the operation and proper management of the company to keep this account? A. The account of fuel and materials on hand, includes materials of all kinds, rails, ties, lumber, also steel, copper, wheels, axles, and everything that is used in the operation and construction. We are obliged to keep a large amount of fuel on the western lines to be prepared in case of snow blockades, when we are not able to get coal. The material comprises everything which may be needed.

Q. How about lumber and bridge timber? A. It is included in the account.

Q. You have spoken of the sinking fund. Explain what that is? A. Certain of our mortgages provide that a certain number of bonds must be redeemed each year. The Dubuque division bonds and the Wisconsin Valley division bonds I have in mind now.

Q. And this sinking fund is a sum of money set apart to redeem the bonds as they become due on the mortgage contract? A. Set apart to redeem these bonds.

Re-cross Examination by Mr. Null.

Q. Mr. Winne, the sinking fund is separate and distinct from the income account? A. Yes, sir; the sinking fund is different from the income account.

Q. And the $590,764.89 in the sinking fund is a sum of money derived from the profits in addition to the money remaining in the income account? A. That is money which

has been charged to income account, but of course the sinking fund is an annual matter—

Q. And the funds in the sinking fund are invested in the bonds shown upon the opposite side of the account. A. Yes, sir.

Q. And the fact that the company requires a large amount of cash and surplus with which to do business does not alter the fact that the balance in this income account comes from the earnings of the company? A. It does not alter that fact; no, sir.

Witness excused.

A. C. BIRD, called as a witness on behalf of the plaintiff, having been duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Bird, state your name, age and the position you occupy with the Chicago, Milwaukee and St. Paul Railway Company? A. A. C. Bird; fifty-five; am general traffic manager of the Chicago, Milwaukee and St. Paul Railway.

Q. As general traffic manager of the Chicago, Milwaukee and St. Paul Railway, state fully the duties devolving upon you? A. My duty is to superintend all the traffic operations of the company.

Q. The traffic operations of the company include the freight business and passenger business both, do they? A. Yes, sir; earnings of the freight and passenger trains. The earnings derived from freight, passengers and baggage.

Q. How long have you been general traffic manager of the plaintiff company? A. About two years, a little over two years.

Q. Prior to that time were you connected with the company? A. Yes, sir; as freight traffic manager.

Q. How long were you freight traffic manager of the company? A. I cannot answer accurately. I was appointed general freight agent on the 1st day of January, 1883, and some years thereafter made freight traffic manager, that continued until about the 20th day of December, 1895, I believe, when I was appointed general traffic manager.

Q. Prior to your appointment as general traffic manager of the company did you have entire charge of the freight traffic? A. Yes, sir; I had general charge of the freight traffic.

Q. And now you have both? A. Yes, sir; freight and passenger.

Q. Prior to your entering the services of this company in 1883, in what business were you employed? A. Business of transportation or railroad services since about the close of the civil war. I do not remember the exact date. About thirty or thirty-two years with the exception of a year. About thirty-two years with the exception of about a year I have always been in the railroad service.

Q. With what railroad company? By what railroad company were you first employed, and in what capacity? A. The St. Louis and Terre Haute Railway Company in the capacity of a night watchman.

Q. Where? A. Pana, Illinois.

Q. After that, what railway service were you engaged in? A. Clerk at a local station, bill clerk, and sold tickets.

Q. You may go on from that time to the time of entering the service of this company, and state in chronological order your services and experience in traffic and railway busi-

ness? A. I was station clerk in Pana a number of years. I do not remember the date. About 1871 I went to the general offices of that company in St. Louis and clerked in the general office in the freight department; in the general freight agent's office. I afterwards took a position as chief clerk of another company, the St. Louis, Kansas and Northern Railway, I was chief clerk of the general freight office, and was subsequently appointed general freight agent of that company, I continued in that position until the road was consolidated with the Wabash in 1879, under the title of the Wabash, St. Louis and Pacific Railroad Company, and I then became general freight agent of the new corporation. I remained with the company, as general freight agent or superintendent of the freight traffic; I remained with the company until I was appointed general freight agent for the Chicago, Milwaukee and St. Paul Railway Company, the 1st day of January, 1883, fifteen years ago, the first day of this month.

Q. During the time that you have mentioned, have you, in the performance of your duties become familiar and acquainted with the traffic business of railway companies as conducted in the United States? A. Yes, sir; more or less familiar.

Adjourned to 2 o'clock.

2 p. m., January 21, 1898.

A. C. BIRD, a witness for the complainant, resumed the witness stand, and testified as follows:

Direct Examination continued by Mr. Peck.

Q. Mr. Bird, by what officer of the Chicago, Milwaukee and St. Paul Railway Company are rates for the carriage of

freight traffic determined or established? A. By the general traffic manager; it is under his supervision.

Q. Are schedules of such rates prepared and printed under your direction? A. Yes, sir.

Q. By what are you governed in the ascertaining of rates in the State of South Dakota? A. By the local distance tariff: South Dakota tariff.

Q. Have you such a tariff with you? A. Yes, sir.

Q. Will you produce it? A. I will.

(Handing to counsel for complainant, G. F. D. No. 13328 in effect December 22, 1895.)

Mr. Peck: Mr. Bird, I notice this tariff sheet states that it is subject to the western classification; just briefly explain what that means? What classification is? A. The western classification is a classification of freight established to determine the rate of freight charges which is used by the western railroads; roads west of the Indiana and Illinois state line, to and I believe including the Pacific coast states; the classification names every article that is subject to transportation by freight train and which article is given a designated class; designated as in some class, and this tariff gives rates 1 to 5 and class A to E, besides specific rates on other articles, such as corn, salt and live stock, so that to determine what rate shall apply on a given article it is necessary to ascertain what class it is in, and then you ascertain the distance the freight has to be moved and the tariff will show the rate that should be applied. The western classification is the result of a number of years experience and of conferences with other roads. It was adopted to insure so far as possible uniformity of charges.

Q. I notice on this schedule, on the left of the center a

column headed carloads and on the right, margin class and cents per 100 pounds; explain that? A. On the left half of the page are articles grouped under the general heading "carloads," which articles are usually shipped in carload lots, flax seed and all kinds of grain, lumber and live stock, while upon the right hand of the page is included classes 1, 2, 3, 4 and 5, and A, B, C, D and E, generally considered merchandise and is generally shipped by the 100 pounds and not by the carload, but classes A, B, C and D, are shipped by the car load also.

Q. You are aware of a schedule of distance tariffs promulgated by the Board of Railway Commissioners of the State of South Dakota, sometime in August, 1897, and which is set out in the bill of complaint in this case, are you? A. Yes, sir.

Q. Have you a copy of that Commission's tariff with you? A. I do not think I have; I have not an exact copy of it; I have a transcript—a full statement of rates made by the commissioners. I have not an official copy made by the commissioners. I have a copy of the one originally issued, but it was amended by the commission afterwards so this is not complete.

Q. Mr. Bird, does the tariff adopted and promulgated by the Railway Commissioners of South Dakota differ in any respect from the existing distance-tariff of the State of South Dakota? A. Yes, sir; it does.

Q. Have you compared the two tariffs for the purpose of ascertaining the differences existing between them? A I have.

Q. Does the commissioners' tariff adopt any different classification from the existing distance-tariff? A. In promulgating a new schedule of rates, the commissioners' fol-

lowed the western classification with some few variations, but I am not able to state them in detail without a further examination.

Q. Have you before you a paper on which you have stated the existing distance-tariff rate, the commissioners' distance-tariff rate, the difference in the rate and the percentage of difference in the rate? A. I have.

Q. Will you produce it? A. I will.

Producing same and handing to counsel for complainant, which was marked by the special examiner for identification, Exhbibit 16.

Q. Will you take this paper and point out how it was prepared and what the different figures indicate in respect to the old tariff and the new tariff? A. This statement is prepared in groups of four lines; the first represents the rate on each class and article for five miles. The second, the rate ordered by the Commission on the same articles and third, the difference in cents per 100 pounds and upon the fourth line the percentage of reduction. That is, for five miles, and this statement like the tariff is prepared in blocks of five miles, up to 100 miles and from 100 miles up to the end, that is 400 miles, in blocks of ten miles and the percentage which I have just described applies to each block, and to each rate in each block.

Q. For the purpose of illustrating how this paper was prepared and what it shows, I will ask you to read the first block? A. On first class for five miles the present rate is 12 cents per 100 pounds; the rate ordered by the commissioners is 9.6 cents per 100 pounds, a reduction of 2.4 cents or twenty per cent. Second class for five miles, present rate 10 cents, commissioners' rate 8 cents, reduction of 2 cents or twenty per cent. Third class, existing rate 8 cents,

commissioners' rate 6.4 cents, reduction 1.6 cents, or twenty per cent. Fourth class, existing rate 6 cent, commissioners rate, 4.8 cents, reduction 1.2 cents per 100 pounds, or twenty per cent. Fifth class, present rate 5 cents, commissioners' rate 4 cents, reduction 1 cent or twenty per cent. Class A the same exactly. Class B, existing rate is 4 cents, commissioners' rate 3.2, reduction .8 cents per 100 pounds, or twenty per cent. Class C, existing rate 3.5 cents, commissioners' rate 2.8 cents, reduction .7 cents per 100 pounds or twenty per cent. Class D, existing rate 3 cents, proposed rate 2.4 cents, reduction .6 of a cent or twenty per cent. Class E, existing rate 2.5 cents, commissioners' rate 2 cents, reduction .5 of 1 cent or twenty per cent. On flax seed, the existing rate is 5 cents, the commissioners' rate is 4 cents, reduction 1 cent or twenty per cent. Wheat and flour and other grain, all the same as flax seed in each particular. On cement and stucco the existing rate is 3 cents, the commissioners' rate 2.4 cents, reduction .6 of a cent, or twenty per cent. On lumber, lath and shingles the existing rate is 4 cents, commissioners' rate 2.8 cents, reduction 1.2 cents per 100 pounds, or thirty per cent. I cannot state the precise rate on live stock, on horses and mules, because our present tariff in South Dakota shows the rate on horses and mules in car load lots, so many dollars per car and the rates on all other live stock on our tariff and on all live stock according to the commissioners' tariff is so much per 100 pounds, but the carload rate on horses and mules applies to cars of certain dimensions, of certain specific cubic capacity, so that the amount of reduction of percentage is substantially twenty per cent. in every block of the tariff, that is, it would not vary more than a few cents one way or the other on the carload. Now, on cattle and calves their reduction is from 5 cents to 4 per 100 pounds,

or twenty per cent., but on hogs it is thirty-three and a third per cent., that is to say, the existing rate is 6 cents and the commissioners' rate is 4 cents, the amount of reduction is 2 cents per 100 pounds or thirty-three and one-third 100ths of 6 cents and on sheep the same schedule as on hogs. That is the answer so far as relates to all of the rates for distances of five miles.

Q. Now, on that paper which you have produced, you have tabulated all of the existing rates, the commissioners' rates the reduction in cents, and the reduction by percentage? A. Yes, sir.

Q. Is there a reduction on every item in the tariff? A. There is a reduction of not less than twenty per cent. on every item in this tariff; upon class E, for distances of ten miles and upwards to and including 140 miles of from twenty-seven per cent. on ten miles, to thirty-one per cent. on fifteen miles, as high as thirty-three per cent., but in no case less than twenty per cent. for any distance on that class. On flax seed, the reduction for five miles is just twenty per cent.; for ten miles it is thirty-three and one-third per cent. and the per cent. of reduction on ten miles and upwards up to and including 160 miles, is from thirty to thirty-three and one-third per cent., but in no case less than thirty per cent. For distances of 160 miles up to and including the extreme limit of the tariff, 400 miles, from twenty-seven per cent. to thirty per cent., but in no case within that range is it less than twenty-seven per cent. The reduction on wheat and grain and flour is twenty per cent. in each case. The reduction upon salt, cement and stucco is twenty per cent. in each case throughout the entire scope of the tariff. The reduction upon lumber, lath and shingles from five miles up to and including ninety miles, is thirty per cent. There might be some mistake there, but it appears that for a

ninety-five mile haul the reduction is thirty-eight per cent. and for a distance of 110 miles up to and including 170 miles the reduction is thirty per cent. For distances greater then 170 miles up to and including 220 miles, the reduction is from twenty to twenty-nine per cent, but in no case is it less than twenty per cent. For all distances exceeding 220 miles the reduction is twenty per cent. On all other classes, being rates on live stock, the reduction is substantially twenty per cent. and in no case less than twenty per cent., except as I have previously stated there is some fractional variation. Twenty per cent. is the minimum reduction for five miles on anything.

Q. Was this paper prepared by you, under your personal supervision or direction? A. Yes, sir.

Q. Is it a true and accurate statement of the existing rates, commissioners' rates, the reduction in cents and the reduction by per centages? A. It is.

Mr. Peck: I offer it in evidence.

Exhibit 16 here received in evidence.

Exhibit 16.

L. W. CROFOOT, SPECIAL EXAMINER

	Classes.										Rates for	Commodities—Carloads.									
	1	2	3	4	5	A	B	C	D	E		Flax Seed.	Wheat Flour	Other Grain	Salt Cement Stucco	Lumber Lath Shingles	Horses* Mules	Cattle Calves	Hogs	Sheep
Present	12	10	8	6	5	5	4	3.5	.3	2.5		5	5	5	3	4	$11	5	6	6
Proposed	9.6	8	6.4	4.8	4	4	3.2	2.8	2.4	2	5	4	4	4	2.4	2.8	8.8	4	4	4
Reduction	2.4	2	1.6	1.2	1	1	.8	.7	.6	5		1	1	1	.6	1.2	2.2	1	2	2
Per cent.	20	20	20	20	20	20	20	20	20	20		20	20	20	20	30	20	20	33⅓	33⅓
Present	15	13	11	8	6	6	5	4.5	3.75	3		6	5	5	4	4.5	13.5	6	7	7
Proposed	12	10.4	8.8	6.4	4.8	4.8	4	3.6	3	2.2	10	4	4	4	3.2	3.15	10.8	4.8	5.6	5.6
Reduction	3	2.6	2.2	1.6	1.2	1.2	1	.9	.75	.8		2	1	1	.8	1.35	2.7	1.2	1.4	1.4
Per cent.	20	20	20	20	20	20	20	20	20	27		33⅓	20	20	20	30	20	20	20	20
Present	18	15	12	9	7	7	6	5.5	4.5	3.5		6.5	5.5	5.5	5	5	11.5	6.5	7.8	8
Proposed	14.4	12	9.6	7.2	5.6	5.6	4.8	4.4	3.6	2.4	15	4.4	4.4	4.4	4	3.5	11.6	5.2	6.25	6.4
Reduction	3.6	3	2.4	1.8	1.4	1.4	1.2	1.1	.9	1.1		2.1	1.1	1.1	1	1.5	2.9	1.3	1.55	1.6
Per cent.	20	20	20	20	20	20	20	20	20	31		32	20	20	20	30	20	20	20	20
Present	21	18	14	11	8	8	7	6	5	4		7	6	6	6	5.5	16.5	7.5	8.6	9
Proposed	16.8	14.4	11.2	8.8	6.4	6.4	5.6	4.8	4	2.8	20	4.8	4.8	4.8	4.8	3.85	13.2	6	6.9	7.2
Reduction	4.2	3.6	2.8	2.2	1.6	.16	1.4	1.2	1	1.2		2.2	1.2	1.2	1.2	1.65	3.3	1.5	1.7	1.7
Per cent.	20	20	20	20	20	20	20	20	20	30		31	20	20	20	30	20	20	20	20
Present	24	20	16	12	10	10	8	7	6	5		7.5	6.5	6.5	7	6	19	8.5	9.4	10
Proposed	19.2	16	12.8	9.6	8	8	6.4	5.6	4.8	3.5	25	5.2	5.2	5.2	5.6	4.2	15.2	6.8	7.5	8
Reduction	4.8	4	3.2	2.4	2	2	1.6	1.4	1.2	1.5		2.3	1.3	1.3	1.4	1.8	3.8	1.7	1.9	2
Per cent.	20	20	20	20	20	20	20	20	20	30		33	20	20	20	30	20	20	20	20
Present	27	23	17	14	11	11	9	8	7	5		8	7	7	8	6.5	21	9.5	10.2	10.7
Proposed	21.6	18.4	13.6	11.2	8.8	8.8	7.2	6.4	5.6	3.5	30	5.6	5.6	5.6	6.4	4.55	16.8	7.6	8.15	8.85
Reduction	5.4	4.6	3.4	2.8	2.2	2.2	1.8	1.6	1.4	1.5		2.4	1.4	1.4	1.6	1.95	4.2	1.9	2.05	1.85
Per cent.	20	20	20	20	20	20	20	20	20	30		30	20	20	20	30	20	20	20	17
Present	29	25	19	15	12	12	10	9	7	6		8.5	7.5	7.5	8	7	22.5	10	10.9	11.4
Proposed	23.2	20	15.2	12	9.6	9.6	8	7.2	5.6	4		6	6	6	6.4	4.9	18	8	8.7	9.1
Reduction	5.8	5	3.8	3	2.4	2.4	2	1.8	1.4	2	35	2.5	1.5	1.5	1.6	2.1	4.5	2	2.2	2.3
Per cent.	20	20	20	20	20	20	20	20	20	33		30	20	20	20	30	20	20	20	20
Present	30	26	20	15	12	12	11	9	8	6		9	8	8	9	7.5	23.5	10.5	11.6	12.1
Proposed	24	20.8	16	12	9.6	9.6	8.8	7.2	6.4	4	40	6.4	6.4	6.4	7.2	5.25	18.8	8.4	9.3	9.7
Reduction	6	5.2	4	3	2.4	2.4	2.2	1.8	1.6	2		2.6	1.6	1.6	1.8	2.25	4.7	2.1	2.3	2.4
Per cent.	20	20	20	20	20	20	20	20	20	33		29	20	20	20	30	20	20	20	20
Present	31	26	20	16	12	12	11	9	8	6		10	8.5	8.5	9	8	25	11	12.3	12.8
Proposed	24.8	20.8	16	12.8	9.6	9.6	8.8	7.2	6.4	4	45	6.8	6.8	6.8	7.2	5.6	20	8.8	9.85	10.25
Reduction	6.2	5.2	4	3.2	2.4	2.4	2.2	1.8	1.6	2		3.2	1.7	1.7	1.8	2.4	5	2.2	2.45	2.55
Per cent.	20	20	20	20	20	20	20	20	20	33		30	20	20	20	30	20	20	20	20
Present	32	27	21	16	13	13	11	10	8	6		10.5	9	9	10	8.5	26	11.5	13	13.5
Proposed	25.6	21.6	16.8	12.8	10.4	10.4	8.8	8	6.4	4	50	7.2	7.2	7.2	8	5.85	20.8	9.6	10.4	10.7
Reduction	6.4	5.4	4.2	3.2	2.6	2.6	2.2	2	1.6	2		3.3	1.8	1.8	2	2.65	5.2	1.9	2.6	2.8
Per cent.	20	20	20	20	20	20	20	20	20	33		30	20	20	20	31	20	16.5	20	20
Present	33	28	21	17	13	13	12	10	8	7		11	9.5	9.5	10	9	27	12	13.6	14.1
Proposed	26.4	22.4	16.8	13.6	10.4	10.4	9.6	8	6.4	4.9	55	7.6	7.6	7.6	8	6.3	21.6	9.6	10.9	11.3
Reduction	6.6	5.6	4.2	3.4	2.6	2.6	2.4	2	1.6	2.1		3.4	1.9	1.9	2	2.7	5.4	2.4	2.7	2.8
Per cent.	20	20	20	20	20	20	20	20	20	30		31	20	20	20	30	20	20	20	20
Present	34	29	22	17	14	14	12	10	9	7		11.5	10	10	10	9.5	28	12.5	14.2	14.7
Proposed	27.2	23.2	17.6	13.6	11.2	11.2	9.6	8	7.2	4.9	60	8	8	8	8	6.65	22.4	10	11.35	11.8
Reduction	6.8	5.8	4.4	3.4	2.8	2.8	2.4	2	1.8	2.1		3.5	2	2	2	2.85	5.6	2.5	2.85	2.9
Per cent.	20	20	20	20	20	20	20	20	20	30		31	20	20	20	30	20	20	20	20
Present	35	30	23	18	14	14	12	11	9	7		12	10.5	10.5	11	10	29	13	14.8	15.3
Proposed	28	24	18.4	14.4	11.2	11.2	9.6	8.8	7.2	4.9	65	8.4	8.4	8.4	8.8	7	23.2	10.4	11.85	12.25
Reduction	7	6	4.6	3.6	2.8	2.8	2.4	2.2	1.8	2.1		3.6	2.1	2.1	3.2	3	5.8	2.6	2.95	3.05
Per cent.	20	20	20	20	20	20	20	20	20	30		30	20	20	30	30	20	20	20	20

*Note: Rates on horses and mules are in dollars and cents per car.

Mr. Peck: Mr. Bird, I will ask you to state if in the conduct of the carrying business of a railway company, the local rates bear such a relation to the inter-state rates that if local rates are reduced, an effect will be produced upon the inter-state rates and other local rates, and if so, what that effect will be? A. There should be a fixed relation between local rates of various states and the inter-state rate which applies on traffic to or from that state. All so-called local distance tariffs, and inter-state tariffs are interdependent. There is a standard of maximum rates in every state and there is a varying scale of rates in more densely populated states, or states where there is a greater concentration of traffic, the maximum schedule of rates for that state is invariably lower, and ought to be lower than in states of less density of population and concentration of traffic, but as a matter of absolute certainty, an inter-state tariff applying between two given states, say between South Dakota and Minnesota cannot be higher than the highest tariff which applies in one or the other of those states. The inter-state tariff ought not in any just sense to be higher than the local state tariff. If the maximum rate schedule of South Dakota is reduced twenty per cent., it does not seem to me to be possible to have an inter-state tariff which should apply between Minnesota and South Dakota or between South Dakota and any other state which could be higher than the local tariff of South Dakota. The facts so far as they affect the Chicago, Milwaukee and St. Paul Railway Company in this local rate proposition are that the states of the two Dakotas, the least settled and having the smallest volume of business of any states through which the road operates, the tariffs of those states are and ought to be on a higher scale than the tariffs of other states, or as high as the highest inter-state tariff. There should be none

higher. So that, if this tariff is to be reduced, I think it must follow as a traffic necessity that the inter-state rates from or between points in South Dakota or North Dakota, and all other states should be brought down to the same extent as the reduction which is made locally in the State of South Dakota. No matter whether as a business proposition it ought or ought not to be as a practical matter, it would be inevitable; it is only a question of time, and if it resulted in bringing down the inter-state rates between South Dakota and points in adjoining states, such as Iowa and Minnesota, the same practical reasons would exist for breaking down the rates between those states and the states next adjoining; I do not see how it would be possible to avoid it by any means whatever; I do not think it could be avoided.

Mr. Peck: Mr. Bird, in the testimony of Mr. Winne, which you did not hear, he produced the division sheets on freight interchanged between this company and the Union Pacific at Omaha, and the Northern Pacific at St. Paul; will you state the principles that govern the adjustments of such divisions between connecting companies at such termina points? A. It is a matter of negotiation.

Q. If the division sheet shows that on freight shipped from Chicago to Fremont Nebraska, the Union Pacific received thirty-six per cent. and our company received sixty-four per cent., notwithstanding Fremont is only about fifty miles from Omaha, how was that allowance to the Union Pacific arranged; what considerations entered into it? A. There were a great many considerations. In the first place treating the subject strictly upon its merits without regard to competition and other forces, due consideration would be given to the western road, as to the general conditions which affect the business, the sparsity of population, and the fact

that a large portion of the line runs long distances through sparsely settled and undeveloped mountainous country; that the frontier road gathers up the business in small quantities and brings it in large quantities to our own terminal where we have simply to hook on to it and haul it away. Those are the first considerations taken into account when negotiations are entered into for divisions, but in addition are other governing factors or the greater question of the competing forces working against you to divert business—not only from your own railroad, but from the cities which your railroad serves, as yours. For example, the business of the Union Pacific Company might be diverted south to St. Louis and to the lower Missouri river towns and then south to the gulf ports so that none of the roads between Chicago and Omaha, or Omaha and Milwaukee or Omaha and St. Paul and Minneapolis were at all sure, or secure in their ability to participate in that business. In addition to the second consideration there is the third one and that is, can you get the business at such a price as will yield sufficient revenue to pay the expenses actually incurred in taking care of it, and a little over to contribute to the general expenses of the property or the maintenance of the system. Now, the circumstances under which this division sheet has been made and under which it has been changed or modified from year to year, since 1871, the question of competition has been more prominent year after year until now, it is the dominant influence.

Mr. Peck: Mr. Bird, this company has a line from Chicago to Omaha upon which its trains run and must be run to do its business; is it considered expedient and beneficial not only to the company itself, but to the public that it should engage in this traffic to such an extent as it can without absolute loss of its revenue? A. Yes, sir; I think

it is; I am swearing to that as a firm conviction. My belief is that it is most decidedly to the advantage of the company and the people in the territory through which the road is operated.

Q. Now, Mr. Bird, you have stated that the Union Pacific is built through a region sparsely settled, and that it reaches points where it connects with a larger number of railroads leading eastward and southward; now state how many roads are practical competitors for all of the business that goes to or comes from the Union Pacific region? A. There are eight roads at Omaha, at Sioux City one or two, and at Kansas City fifteen or sixteen that are competing for the business.

Mr. Bird: I would like to state further and in addition to my answer to a former question that the application of these divisions on west-bound traffic is not caused entirely or wholly by the same circumstances and condition that affect east-bound traffic, but there is more or less competition involved in the distribution of west-bound freight and in order to make satisfactory arrangements for east-bound traffic, you must concede to connecting roads reasonable and satisfactory arrangements on west-bound business, otherwise the connecting road would set up local charges in every case from Omaha instead of participating in the rates which are less than the added locals.

Mr. Peck; Q. The order of the South Dakota Railroad Commissioners includes passenger rates, does it not? A. Yes, sir; it fixes a maximum rate for passengers in the state.

Q. What reduction does it make? A. The local rate basis?

Q. Yes? A. Twenty-five per cent. of the maximum rate; from 4 cents to 3 cents per passenger per mile.

Q. State whether the same reasons that govern the division of rates with the Union Pacific are applicable to the division of rates with the Northern Pacific at St. Paul fully or partially? A. What I have said in regard to the division of rates in connection with the Union Pacific applies with equal effect to the traffic done in connection with the northern lines and in some cases with greater effect because of water competition of the great lakes. Generally the circumstances and conditions are the same.

Cross-Examination by Mr. Null.

Q. Mr. Bird, you produced here what you called an inter-state distance tariff governing traffic on lines of your company in South Dakota and certain other states. I will ask you, is this the tariff which is applied to freight shipment this the tariff which is in the State of South Dakota? A. It applies locally, yes, sir; in that state as well as certain others states and between certain other states.

Q. So that the name "Inter-state Distance-tariff" does not preclude this sheet being applied to local shipments in the state? A. It does not.

Q. Have you any other tariffs applying to the shipment of local freight in the State of South Dakota? A. There must be some other rates, or some exceptions.

Q. Have you tariff sheets here which show the exceptions? A. No, I have not them here; there are exceptions in every state. This is the maximum rate sheet of South Dakota.

Q. Then I understand you to say that this is the maximum rate sheet controlling in South Dakota? A. The maximum, and it is the standard rate as well.

Q. But the rates indicated in this inter-state distance-tariff do not necessarily control in all shipments of local freight in that state? A. I say exceptions, there must be exceptions where the rates are less than those shown by the maximum sheet. We made rates on grain for awhile, temporary rates; merchandise rates are made very often. Some are extensive and some less so. I have in mind rates on grain that we made a year or two ago, but I do not think they are in effect now, but those things are occurring all of the time.

Q. Can you call to mind at this time any particular exception; any notable exception in the State of South Dakota A. Applying locally in the state?

Q. Yes? A. I think we have one or two tariffs that may be exceptional.

Q. What are they? A. I think we have a tariff on merchandise from Aberdeen and one from Sioux Falls.

Q. Have you those tariffs here? A. Not here.

Q. Can you produce them? A. I can in the course of the investigation. I cannot get them at a moment, but they can be had in a short time.

Q. They are in your office? A. They are in the office.

Q. We would like to have those. Now, have you compared the commissioners' schedule adopted the 26th day of August, 1897, with those exceptional rates? A. I do not think I have; I do not think I have had occasion to do that. I do not see how I could compare it with the exceptional rates and get any precise result whatever. The rate is made for the merchandise and it can be taken out or reduced further or increased as the case requires, or it may be equalized against a short line and you cannot tell by a system of comparison the percentage of reduction; there is no such a

thing known unless the reduction is a horizontal reduction. If it is not a horizontal reduction, it cannot be stated by percentage.

Q. Are you familiar with the volume of traffic in South Dakota? A. Locally?

Q. Yes? A. Pretty generally.

Q. Have you any statements or tables showing the amount of traffic in South Dakota for the transportation of which the company receives the amounts indicated by these inter-state distance tariffs? A. I do not keep that; that does not come within the line of my duty, to keep statistics. I do not know whether such a statement could be made accurately or not; I presume it could be, in time, but I do not know what time it would take to make it.

Q. You also have a special rate on merchandise from Sioux City to points in South Dakota, have you not? A. No, sir.

Q. How is that? A. No.

Q. There is no special rate? A. No special rates; there is a regular open tariff; we have a tariff from Sioux City to points in South Dakota.

Q. Is not there a special one; I mean it is special as against the inter-state distance-tariff? A. It is a terminal tariff. I did not understand the word "special" as you used it.

Q. So far as the shipments of merchandise in South Dakota is concerned there are at least three notable exceptions? A. Not notable, I don't admit that. I could not admit the word "notable" in my answer.

Q. There are three exceptions? A. Three exceptions that now occur to me.

Q. And they would be for the shipment of merchandise from Aberdeen and Sioux Falls and from Sioux City to points upon your lines in South Dakota? A. Well, we have tariffs you know from every place; every where to every place on our road; we have tariffs from all stations to Minneapolis and St. Paul and on to Chicago and Milwaukee and to points in South Dakota and Sioux City and we have a tariff from Sioux Falls and Sioux City to points in South Dakota.

Q. And those tariffs are lower than these tariffs indicated in this inter state distance sheet? A. Where?

Q. This Sioux Falls and Sioux City? A. I think the tariff from Sioux City to points in South Dakota is less than the inter-state distance tariff, which is the maximum rate basis of the state; I know the rates are less somewhat.

Q. Is there any regular reduction, that is, is the Sioux City tariff a certain per cent. lower than the inter-state distance-tariff? A. No; all such tariffs—all the tariffs you refer to are merchandise tariffs and they are made by force of competition and for the purpose of equalizing the tariff in favor of the people doing business in South Dakota. Some of the e tariffs were made by reason of competition with other companies, with other roads, but the tariff from points in South Dakota to other points in South Dakota, which are lower than the maximum rate, which are made exclusively on merchandise, it is to protect somebody in that state against competition from somebody out of the state, and these tariffs are subject to recall at our pleasure and are not tariffs which in any way affect our standing in other states, or furnishes a maximum basis for doing business in other states, nor do they act as a controlling factor for the moving of general traffic.

Q. You have in your office tariff sheets showing these tariffs to South Dakota points? A. From where? from Aberdeen?

Q. Yes; and all other points where special tariffs have been made? A. We have a copy in our office, or we are supposed to have a copy in our office, of all tariffs in effect anywhere on the road.

Q. You have a printed form of tariff from St. Paul and Minneapolis to South Dakota points? A. The tariff which I hold in my hand is No. 13328 and this is by no means the largest number. I do not know, I would have to find out. If you ask me if we have tariffs from such and such places I will ascertain, but I cannot undertake to answer from memory, there are so many points that might be involved in that question.

Q. Will you procure for us the tariff from Minneapolis and St. Paul and from Aberdeen, Sioux Falls and Sioux City? A. Yes, sir.

Q. Is there a tariff in from Yankton? A. To where?

Q. To South Dakota points? A. I could not answer from memory; you mean other than the maximum rate sheet?

Q. Yes? A. I am not able to answer from memory; I will have to inquire.

Q. I understand you to say that these tariffs put in at these jobbing points on merchandise do not influence the inter-state tariffs? A. I said so; I testified to that as a matter of judgment.

Q. I understood you to testify that the reduction made by the commissioners on local shipments in South Dakota would influence the tariffs on inter-state traffic? A. Undoubtedly.

Q. Will you please explain wherein the difference lies between the local tariffs in South Dakota and the tariffs made locally to Sioux Falls, Aberdeen and Sioux City? A. The local tariff so-called, or maximum rate sheets, are recognized as the highest rate that can be charged under proper authority, or for which there is authority or which is recognized by the state authorities in any manner whatever. It is a schedule of rates which the carrier may charge, if it can. The other sheets show rates that they can charge; that they can get and move the business; rates that are not prohibitive, that are such as will enable the dealer to trade against conditions that affect him otherwise, competitive conditions. Now the inter-state tariffs cannot with any reason be made higher than the local tariff sheet. You can not have an inter-state rate which is higher than the two locals, in other words, you cannot have a low scale of rates in South Dakota and a low scale in Minnesota and a high scale of rates applying between the two states. The people in Minnesota are jealous of rates in other states just as the people of South Dakota are said to be jealous of the rates that apply in Iowa and, while they would pay no attention to the merchandise rates which are made from time to time and which may be canceled at any time at the will of the carrier, they would pay the greatest attention and would lay the greatest stress upon the maximum rate sheet of that state with a more dense population and greater concentration of traffic. They would never for a moment submit to a higher scale of rates in Minnesota than the maximum rate in South Dakota, and when you come to Iowa, low as those rates are, they would not submit to a scale of rates in that state approximately as high as the rates in South Dakota and Minnesota, and so on clear through. It is a fact demonstrated by thirty-two years of experience that the

rate-making power is exercised chiefly through jealousy, and that in my opinion, we can never exact a higher scale of rates in Minnesota or Wisconsin or any other state through which our line passes and is operated, than the maximum rate of South Dakota or North Dakota. I think the longest period of the existence of higher rates would be until the next meeting of the Board of Railroad Commissioners or the legislature as the case might be.

Q. I will ask you if it is not a fact that the bulk of the merchandise distributed in South Dakota is either distributed from Aberdeen, Sioux City, Sioux Falls or the twin cities? A. No; I think not; I think perhaps the shipments from St. Paul, Minneapolis, Aberdeen, Sioux Falls and Sioux City is greater than the shipments from other places on our road to points in South Dakota.

Q. Is it a fact that any merchandise is distributed in South Dakota from any jobbing any point either a South Dakota city or other cities, at a rate which is anywhere near equal to the rates charged in this inter-state distance-tariff? A. I think so.

Q. It would be a very light per cent., however, of the total volume of merchandise business? A. Probably sixty-five or seventy per cent., sixty per cent. possibly.

Q. From what points is merchandise distributed in South Dakota wherein the freight rates are anywhere near the rates indicated in this inter-state distance tariff? A. I think the twin cities; this distance tariff applies, substantially I think—I am not quite sure—on business from Minnesota to points in both the Dakotas. I am not quite positive about that.

Q. Let me ask you, Mr. Bird, if it is not a fact that the highest distributing rate from the twin cities to South Da-

kota points upon your line would be from Minneapolis to Bowdle, South Dakota? A. Well, let me look at that tariff and I will tell you, as I am not sure about that, I will have to look .

Q. Is the rate from any given point outside of South Dakota to a point in the State of South Dakota based to any extent upon the sum of the different local rates over which the merchandise would be distributed? A. I don't think I get your idea quite. Give me an illustration?

Q. Now, you have a rate from Chicago to Sioux Falls? A. Yes, sir.

Q. And you have a rate from Sioux Falls to Chamberlain; now, would a shipment of merchandise from Chicago to Chamberlain be charged for by making up and by adding together the rate from Chicago to Sioux Falls and the rate from Sioux Falls to Chamberlain? A. By no means.

Q. How is it made up? A. From Chicago to Chamberlain, say?

Q. Yes? A The rates are governed purely by competition. That rate to Chamberlain is fixed for us.

Q. What competition is there that fixes it at Chamberlain? A. It is the rate which might be charged or is charged between Chicago and Pierre.

Q. Is it not a fact that the rate to Chamberlain, for instance, is the rate to the nearest competitive point and the local rate from that point to Chamberlain? A. No, sir.

Q. Let me ask you, Mr. Bird, suppose that your company should construct 1,000 miles of road in a new territory, as it did in South Dakota, and you were called upon to prepare a schedule of rates for that new territory, what data would you use, what foundation, with which to construct

that schedule? A. I testified this morning that I had been in the service somewhat over thirty years and had been engaged in making rates during that time and I never have yet had an opportunity of making a tariff on a basis of what the service was worth. I have never had the opportunity to determine the rate by the value of the services. The rates are made what they must be. The rate on wheat from Duluth to Buffalo has a good deal to do with fixing the rate from any point on our road in the Dakotas to Chicago, Milwaukee, Minneapolis and other markets, and if I should undertake to tell you how we make rates to Chamberlain I would have to sit down with you with a map or diagram and go over the whole territory, but I say this, there is not a place on the St. Paul lines where the rates are made with reference to the value of the services to be performed.

Q. Then it is simply a question of making the best rate you can, competition and other things being considered? A. Just exactly as those merchandise rates from Aberdeen and Sioux Falls to South Dakota stations; sometimes they are made by competion, people saying "We are ruined if you don't do it," and sometimes they state the case correctly and we try to make the rate to suit their case.

Q. But in no case have you ever in your experience of thirty years been able to make a rate which would yield what you would consider a sufficient return to reward the company for its services? A. I can say that I have not. The circumstances are as varied as one can imagine, where the rate is considered fair and reasonable compensation. But you establish a general basis of rates, and it is the standard for your business. I do not recall a place where we have been able to make a rate with sole reference to the service.

Q. Mr. Bird, has the character of the service anything to do with the making of the rate? A. I don't quite comprehend the drift of that question?

Q. We will suppose that a line was served by two trains per day and another line was served by a train three times per week, would those facts have anything to do with fixing the rates to be charged? A. Well, I should have to answer that by going back to my other answer, that as a general proposition the rates are made upon the basis of what the competition generally will permit, and they are not made upon the value of the services at all. They are not based upon the value of the services.

Q. I understood you to say, Mr. Bird, that the western lines were accredited with a greater share of the earnings than the eastern lines by reason of their gathering up the business coming eastward, and their distributing the business going westward? A. I testified in that direction.

Q. I understand you to say that in your opinion a railway company operated west from Omaha, which would receive a train load of freight from your western terminal, and carry it out as local freight, and distribute it, is entitled by reason of the services rendered to greater compensation per mile than your company would be entitled to for a straight haul of a train load from here to your terminal? A. No; I did not say that; I was speaking then of east-bound business, not of west-bound business.

Q. Is that true of west-bound business? A. It is not true of west-bound business as it is of east-bound business. It would depend entirely upon a thousand and one circumstances.

Q. Is it not a fact that it costs more per mile to handle freight from the point where the distributing begins to the

point where the distributing ends, than it does to haul it the intermediate haul? A. Way freight service costs more than through freight service.

Q. And the company performing the way freight service is entitled as a matter of right to greater compensation than the company performing the through freight service? A. No; not as a matter of right, but as a matter of trading favorably and sharply and as a matter of whether it has the power to force concessions; in other words, it is largely a question of competition.

Q. Then it is largely a question of figuring? A. Yes; competition, trade, as I first stated in my testimony.

Q. So, then, if circumstances were such that the tariff which the commissioners have prepared was all that the circumstances in South Dakota would admit of, it would be the tariff, would not it? A. It does not follow; I do not think that that would be the tariff because that is so; I think the tariff ought not to be so high as to be prohibitory. I don't quite understand the drift of your question.

Q. (Question read by the stenographer.) A. I do not know whether it would be the tariff; if the figures which the commissioners prepared or prescribed here were as high as could be obtained, and there was sufficient revenue to more than pay the actual cost of moving the freight, it ought to be used, although they might not be sufficient to contribute their full share to the payment of the expenses of the system.

Q. You say that the volume of business has some influence upon that? A. Upon what?

Q. Upon the question of your division of earnings? A. I don't know that I said that.

Q. Did I not understand you to say that the large volume

of business which the Union Pacific furnished was one of the considerations for the concessions made? A. No; I did not say that. I did not mean that.

Q. That is not the fact? A. No; I don't understand it so.

Q. The volume of business has no influence upon that? A. Oh, it would not be right to say that the volume of business had no influence, but I would say that I don't remember of testifying that the volume of business had an influence.

Q. But as a matter of fact the volume of business would influence your company in driving a bargain for that business? A. It is a business proposition and it would be treated upon business principles.

Q. Do you know about what the volume of joint business per month is between your company and the Union Pacific? A. No; I could not testify on that point.

Q. I call your attention, Mr. Bird, to Exhibit 10, being a statement from the auditing department of your company of the business done jointly with the Union Pacific for the month of November, 1897, and I would ask you if that does not show a total volume of business of about $36,000? A. About that, as I understand it, yes, sir; the total volume.

Q. I show you Exhibit 11, which is a similar statement from your auditing department, of the joint business with the Northern Pacific, and I ask you if that does not show a total volume of business for that month of about $170,000? A. About $170,000; a little short of it.

Q. Now I call your attention to the fact that for the month of September, 1897, the volume of business between your system and the South Dakota lines of your road aggregated about $425,000? A. For the month.

Q. Yes, and I will ask you if all your other joint traffic arrangements that you have will yield the amount of business that you derive from your South Dakota lines? A. No; but that is not a fair comparison, because a very large proportion of the freight earnings of our South Dakota lines come to us during the month of September; if you would make the comparison by the freight earnings for the whole year, it would be very much more fair to all parties here. We ask Mr. Null to give us an average month; that is the month that we move the crops of South Dakota and it is not a fair average.

Q. Let me ask you if you could to-day enter into a traffic arrangement with any road situate 500 miles from your Chicago terminals which would yield your company a monthly business of $425,000? If you would not enter into an arrangement which would give to such a system of road a division of these earnings similar at least to the division which you make with the Northern Pacific and the Union Pacific?

Mr. Peck: That is objected to.

A. No, sir. We give to the lines in Dakota a pro rate per mile, but we pay all expenses, all interest, all deficits that occur from year to year and rebuild the line every seven years. The terms which are accepted by the Northern Pacific and by the Union Pacific are less favorable than the terms which we concede to a part of our own property. We pay more for the Dakota business than we pay for the Union Pacific or the Northern Pacific business.

Q. Do you desire to make that statement on your reputation as a railroad man? A. Yes, sir; I testify to that under information and belief.

Q. Let us understand that and that is, your fixed charges and operating expenses and taxes in South Dakota costs

your company more money than it would to divide the earnings with South Dakota— A. I don't mean that at all.

Q. Upon the basis that you divide with the Union Pacific and the Northern Pacific? A. I do not mean that at all.

Q. What do you mean? A. I mean that it costs the St. Paul system more money, per ton, to get South Dakota freight than it costs to get freight from the Union Pacific or from the Northern Pacific, in every particular, taking into consideration the maintenance and operating expenses of the road. We don't have to operate any line in Nebraska or the western states, to get freight from the Union Pacific; and we do not have to operate or maintain any part of the Northern Pacific to get the business; it comes to us and they have carried all the burdens of operating and maintaining the roads and that too through a country where it does not pay to operate a road; they have been bankrupt several times.

Q. Do you mean to say that it costs your road more to operate and maintain its lines in South Dakota, upon the present basis, than it would to pay the South Dakota lines a proportion of the earnings equal to the proportion given the Union Pacific and the Northern Pacific and allow the South Dakota lines to sustain themselves out of that revenue? A. They could not sustain themselves out of the revenue received in South Dakota is the point I want to make. If we allowed the South Dakota lines what we allow the Northern Pacific and the Union Pacific, it could not sustain the road. ,That is what I mean when I made the statement.

Q. Do you know what the operating expenses of the lines in South Dakota are? A. Only in a general way.

Q. About what are they? A. I prefer not to testify on

that point, because there are others who will and who are expert and who are familiar with the business.

Q. You have examined the statement in that respect, have you? A. No, not specially.

Q. Now, Mr. Bird, I call your attention to Exhibit 9, which is an exhibit prepared by your auditing department, showing the operating expenses in South Dakota to have been $1,111,394.72? A. Where do you find that?

Q. That is for the year ending June 30, 1897, operating expenses including taxes? A. $1,111,394.72, yes, sir.

Q. Going over to the interest column, we find that the interest upon the mortgages in South Dakota was $1,347,974.43? A. Yes, sir.

Q. Making a total cost of maintaining your lines in South Dakota and paying the interest on the indebtedness the sum of $2,459,369.15? A. I don't understand that; I understand that year shows a deficit of $854,000; that is right, is not it? On the basis of miles of road.

Q. Yes, it shows a deficit of $854,000; I now call your attention to Exhibit 8, page 25—

Witness: You are questioning me about my testimony; we lacked $854,000 of making anything on this business.

Q. Turn back to page 25 of that book? A. I have it.

Q. I call your attention to Exhibit 8, in which your total freight earnings in South Dakota last year was $1,074,741.86, as compiled by your auditing department apportioning to South Dakota freight earnings upon the mileage basis? A. Yes, sir.

Q. I also call your attention to the fact that this $1,074,741.86 credited to South Dakota, is about twenty-five per cent. of the total volume of business, freight business done

in that state? A. I don't think I quite understand that; you say that $1,074,741.86 is twenty-five per cent?

Q. Of the total business? A. Of our company?

Q. Yes, I mean that is twenty-five per cent. or thereabouts of the money realized by your company upon business originating or terminating in South Dakota, local included? In other words your company has carried business in South Dakota, and in and out of South Dakota to the amount of nearly $6,000,000, of which upon a mileage basis you have credited to South Dakota $1,074,741.86? A. Well?

Q. Now, then, if that business was apportioned to South Dakota upon the basis which you apportion the earnings as between your company and the Northern Pacific and the Union, Pacific, do you still insist that your South Dakota lines are the more expensive? A. My impression is that it costs more to get business out of South Dakota than it does off the Union Pacific or Northern Pacific. That is my belief There is nothing here to show how this $6,000,000 was divided; I don't know what the hauls were; I don't know anything about it. I do not find it here and I cannot make any application of your reference to these earnings of $1,074,741.86.

Q. Do you see a note on that subject which reads "interstate revenue divided on basis of miles hauled within and without the state"? A. Precisely.

Q. Now you understand as a matter of fact that that would accord to South Dakota much less than the state would receive if it was divided upon the same basis that you divide with the Union Pacific and Northern Pacific? A. I do not admit that at all. It is not in evidence. This dividing which you have had me testify about is one that governs a great many miles of road and the only point that

has had attention called to it, that I have heard, is a point on the Union Pacific, where it was pointed out that the division appears to be very favorable to the Union Pacific, but it does not include any point far off; any point where the same rate of percentage yields them very much less. You see the real effect of these division sheets, have not been made manifest here at all.

Q. Without reference to long hauls on the Union Pacific, but taking the distributing business in the State of Nebraska by the Union Pacific, I will ask you if you can indicate from your division sheets any rate where the Union Pacific receives business from your line, at Omaha or Council Bluffs, and distributes it upon anything like or near a mileage basis or distribution of earnings. A. Oh, I suppose so. Now, in many cases the traffic of the Union Pacific Railroad is not subject to the division sheets; it is a merchandise rate, which is the sum of the two locals; it is not a division at all.

Q. It is another merchandise case, is it? A. No, sir; I do not think there has been a clear demonstration of what these division sheets mean and what they result in.

Q. You were asked to explain them, were not you? A. No, sir; I have been asked to make an explanation of how they were arrived at, but to follow each class and rate clear through, and each item that is entered on that book, that is quite a different matter.

Q. What is the distance from here to Council Bluffs? A. 488 miles.

Q. What is the distance from Council Bluffs to Fremont? A. I don't know; I can't remember that. About fifty miles.

Q. I understand it is about fifty miles? A. I imagine it is about fifty miles; yes, sir.

Whereupon the further hearing was continued to 10 a. m., January 22, 1898, to be taken up again at the same place.

Chicago, January 22, 1898, 10 a. m.

A. C. BIRD, a witness on behalf of the complainant, resumed the witness stand, and testified as follows:

Cross-Examination continued by Mr. Null.

Q. Mr. Bird, did you bring those freight schedules? A. I brought some tariffs here; a number of tariffs; I have here a tariff on merchandise and all classes of traffic between St. Paul, Minneapolis and other cities and stations in various states, including South Dakota, tariff No. 19,181, issued July 3, 1897, being substantially a reprint of a tariff which previously existed.

Paper here produced by the witness, was handed to special examiner, who marked the same "Exhibit 17."

A. (Continued.) I have also a tariff on merchandise which applies between Sioux Falls, South Dakota, and stations in North and South Dakota; this tariff is numbered 20,632, and was issued on the 19th day of November, 1897, and is substantially a reprint of a previous tariff as I recollect it.

Paper here produced by the witness was handed to the special examiner who marked the same "Exhibit 18."

A. (Continued.) Also tariff No. 3,861, issued November 27, 1889; it applies on merchandise between Aberdeen and stations in Minnesota, Iowa, North Dakota and South Dakota.

Paper here produced by the witness was handed to special examiner, who marked the same "Exhibit 19."

A. (Continued.) I supposed that I had that tariff applying from Sioux City to stations in South Dakota, but I have not. There is one somewheres. I will get it and put it on file here. We have no so-called "terminal tariff" applying from Yankton; I believe that answers your question.

Q. Now I show you tariff sheet and ask you if that is the Sioux City terminal tariff? A. This is No. 12,435 of July 29, 1895, and applies on merchandise between Sioux City and stations in Minnesota, North Dakota and South Dakota; I believe this to be the one now in effect.

Paper here produced by the witness was handed to special examiner, who marked the same "Exhibit 20."

A. (Continued.) I am not certain this is in effect. I am not certain but this has been followed by one of a later date; it might have been amended in some particular.

Q. Will you produce the duplicates of these tariffs, that have been offered here as exhibits; that is, procure other copies for us? A. There is one of these tariffs which is the only one I have left in the general office. I can get duplicates of the others, I suppose.

Q. Especially get the Sioux City? A. Yes, sir.

Q. What tariff governs the shipment of freight from the City of Chicago to South Dakota points? A. I do not remember the number of it.

Q. Is it the inter-state distance tariff? A. No, sir; it is not.

Q. There is a special tariff? A. No, sir; not a special tariff; it is a terminal tariff.

Q. Will you produce such tariff? A. Yes. I can do so. I have not got the tariff; there is a great number and variety of tariffs. The one referred to is a tariff that applies on all

commodities from Chicago, Milwaukee and other places to points west of the Mississippi river; it includes points in South Dakota.

Q. As I understand you, these tariffs that have been offered in evidence and these tariffs from Chicago to South Dakota points, you designate as "terminal tariffs"? A. Yes, sir.

Q. Just explain that term so we will not misunderstand one another; what do you mean by "terminal tariff." A. The tariff which applies to or from some terminal point or distributing point. The tariff which applies to or from the city or locations designated upon the face of the tariff.

Q. Do I now understand you as testifying that there is such a terminal tariff from Chicago, Milwaukee, Minneapolis and Sioux City to points in South Dakota? A. There are terminal tariffs to and from principal market cities of the system; that would include Chicago, Milwaukee and the twin cities, and there is a terminal tariff from Sioux City which has been introduced here and terminal tariffs from Aberdeen and Sioux Falls.

Q. Is there one from Omaha? A. I think not. I am not clear on that point.

Q. Are there any terminal tariffs applying between Dubuque and South Dakota points? A. I think not; I am not sure.

Q. Are there any applying between Winona and South Dakota points? A. Tariff No. 19,981 which is Exhibit 17, is a tariff applying to points in Minnesota, North Dakota and South Dakota and other states, from St. Paul, Minneapolis, LaCrosse and Winona.

Q. Is there a terminal tariff between any Iowa city and points in South Dakota? A. Yes, sir.

Q. What ones? A. Sioux City.

Q. Anything else? A. I do not recollect any other, there may be.

Q. Now will you please explain what shipments of freight would be controlled by the inter-state tariff? A. Where, what?

Q. Anywhere in South Dakota. A. The inter-state tariff covers all traffic of every description except such as is provided for or covered by a terminal tariff.

Q. And I understand you to say you have a terminal tariff which applies to all traffic between Chicago, Milwaukee, LaCrosse, St. Paul, Minneapolis, Sioux City, Sioux Falls and Aberdeen? So that it is a fact, is it not, that your inter-state distance tariff only applies to shipments of freight between small stations? A. No, sir.

Q. From what market points to stations in South Dakota would your inter-state distance tariff apply? A. I cannot name the towns. I cannot answer that question from memory. I cannot answer it with any degree of accuracy, but there are a number of large towns, some large towns in which there are wholesalers, jobbers and manufacturers, which I do not understand have terminals tariffs, and the inter-state distance tariff applies in such cases. I do not think there is any terminal tariff for Rock Island, Moline, Davenport, Cedar Rapids, Clinton, Des Moines or McGregor. There are a great many tariffs in effect on our railway. I cannot state absolutely in each case from memory.

Q. You have a tariff on specific commodities? A. Where?

Q. Generally over the system? A. Why, all tariffs are on specific commodities; all these tariffs I have testified

to are on specific commodities. We have a great many specific tariffs.

Q. The tariffs which you have testified to as "terminal tariffs" relate more particularly to general traffic between given points, do they not? These tariffs provide for all kinds of commodities? A. Yes, sir.

Q. But are restricted to stations between particular stations? A. To stations named in the tariff.

Q. Have you a "commodity tariff" which is restricted to commodities rather than to stations? A. I do not understand your question. We could not make a tariff which refers to commodities and not to stations; it must be between stations. We might have a distance tariff on a certain commodity. We might have a tariff on a commodity between two or more specified places but I do not quite get the drift of your question.

Q. As I understand it, Mr. Bird, the first tariff to which you have called attention here is the inter-state distance tariff; that is, a general tariff applicable to your system except where other arrangements are made? A. Yes, sir; that is right.

Q. The next general tariff or the tariff of most general application is your "terminal tariff?" A. That is right.

Q. Now, you have another system of tariff, by which rates are given upon certain commodities, between certain points, that is, other ones different from any rates named either in the distance tariff or in the terminal tariff? A. We have a "commodity tariff" between given points; we have a tariff on wood pulp from one place to another, and we have a tariff on ice, sand and brick; that is a mileage tariff on those articles. It is a tariff that only covers a limited number of articles.

Q. Now, have you such a tariff applying to the stations upon your railway system? A. All over the system?

Q. Yes, sir? A. I do not think so; I do not remember any. This (examining paper shown him by Mr. Null) is a compilation of the tariff such as have I referred to in my answer; there are commodities between certain specified points.

Q. And those points are points all over the system? A. No, sir.

Q. I do not mean every station; I mean these stations are in every state you operate your road? A. Not necessarily, I do not think so. These tariffs, or compilation of rates, represent the operation of 6,100 odd miles of railway. The rates quoted therein are not general. Here, for instance is a list of rates on coal from Green Bay to points on the Superior division; stations that lie right alongside of Lake Michigan or in close proximity. The low rate made by water competition is confined to places of that kind. These rates are on staple articles.

Q. Let me ask you if there are any rates in that compilation applying to the State of South Dakota? A. I cannot answer that. The tariff is here and will show for itself.

Q. You cannot tell by an examination? A. Yes, sir; I can tell by an examination if any South Dakota stations are included, but it is a very voluminous piece of work. Here is a rate that applies to shipments from Sioux Falls, South Dakota, to Omaha, Sioux City, Emmettsburg, Yankton, Cedar Rapids and Dubuque, on granite paving stone; it is a specific rate on that business. That is the only place I see South Dakota. It is not a manufacturing state and these are manufacturing rates generally.

Q. Let me ask you if there is any schedule applying to

cement from Yankton? A. I do not know whether there is or not; there ought to be, I suppose. I do not find it but I believe it is here, somewhere.

Q. Your understanding is that there is such a schedule? A. My understanding is that we haul cement from Yankton at less than inter-state tariff.

Q. Will you produce us a copy of that schedule? A. I do not know whether we have a copy of that edition or not. I will, if I can. This is not printed for general distribution; it is printed for convenience, in our office.

Q. Is it a compilation of rates that has been made for special cases; special commodities? A. That is a compilation of rates and this printed tariff is for the records of the general office and it is not a tariff in the sense that it is issued for circulation. I understand it so, although it seems to have been filed with the government.

Q. Each station agent on your system is supplied with that, together with your other printed schedules, are they? A. Not necessarily; each station agent is supplied with rates which apply, either directly or indirectly, within his territory, but the station agent at Aberdeen would not be supplied with rates between Green Bay and northern points.

Q. Now, Mr. Bird, you have a rate for the transportation of wheat from points in South Dakota to Minneapolis and St. Paul? A. Yes, sir.

Q. Other than the inter-state distance tariff? A. Yes, sir; it is provided for in the terminal tariff.

Q. Provided for where? A. In the terminal tariff.

Q. Will you produce that tariff? A. Put it on the list, please.

Q. That would cover what commodities besides wheat? A. I think that tariff covers all classes of grain.

Q. And mill stuffs, such as flour and feed? A. That is my recollection. Just wait one moment. My impression is that the terminal tariff includes the rates on all kinds of grain.

Q. That would cover flour, meal, feed, wheat, rye, barley, oats, corn and flax seed? A. I think, in the classification of rates, you will find flour is classed with wheat and meal with corn, so in that sense it would cover all kinds of grain products, and oil cake made from flax seed.

Q. Have you a tariff applying to or from South Dakota stations for the transportation of hay other than the inter-state distance tariffs? A. I am not sure about that; there must be. I think very likely there is one. Some terminal tariff probably.

Q. And have you such a tariff for dairy products from or to points in South Dakota? A. I do not recall any.

Exhibit 21 here marked for identification.

Q. This compilation of rates which I show you and designated as— A. That applies to a class of freight usually denominated "manufacturer's." You will find in there granite paving material, largely handled, handled almost exclusively over our lines in South Dakota, but some from Western Minnesota. It includes hard and soft coal, on certain parts of the system closely competing with lake transportation. It also includes a large number of articles of raw material for the use of manufacturers.

Q. Have you a tariff in effect in South Dakota or rather to points in South Dakota for the transportation of coal other than the inter-state distance tariff? A. We have a terminal tariff on coal that applies from various distributing points to points in South Dakota as well as points in other states.

Q. Have you a tariff to or from points in South Dakota

for the transportation of live stock, other than the inter-state distance tariff? A. We have a terminal tariff on live stock from points in South Dakota.

Q. Have you a tariff for the transportation of lumber to or from points in South Dakota, other than the inter-state distance tariff? A. We have terminal tariffs from all the prominent markets and manufacturing cities to all points on the road, on all classes of business, including those you have mentioned, lumber, lime, salt, coal, live stock and grain.

Q. So that your answer to that question would be yes? A. Yes, sir.

Q. Then, Mr. Bird, it is a fact, is it not, that about every commodity that is transported upon your lines of railway, from all the leading distributing points upon your system of railway to points in South Dakota is controlled by some tariff or other, other than the inter-state distance tariff? A. We have a terminal tariff from all points—

Q. That question calls for "yes" or "no"? A. Well, I cannot answer yes or no, because I cannot answer that question and get the truth before this court with a "yes" or "no."

Q. You made a comparative statement there showing the reduction in your tariffs, as you understood them, the comparison being made with your inter-state distance tariffs, is that correct? A. The statement which was offered in evidence, was a comparison between the local state tariffs of South Dakota and the commissioner's rates.

Q. Now, the rate, which you have compared with the commissioners' rate, was what you called your inter-state distance tariff as applied to South Dakota? A. As applied between South Dakota and some states, not all.

Q. In making that per cent. you made no allowance or computation based on the terminal tariffs you have talked about? A. I did not take the terminal tariffs into account at all.

Q. I wish you would take the principal tariff there and tell me what the rate is from Minneapolis to Big Stone City, on the H. & D., first class freight; these questions will all be directed to first class freight? A. To Big Stone City?

Q. Yes? A. 56 cents.

Q. And what is the rate over the same line to Aberdeen? A. 88 cents.

Q. And what is the rate to Wolsey? A. 88 cents.

Q. And what is it to Woonsocket? A. 80 cents; I am speaking from Minneapolis and St. Paul.

Q. That, you say, is 80 cents? A. 80 cents.

Q. And what is the Redfield rate? A. 88 cents.

Q. Now, I wish you would take your inter-state distance tariff and tell me what would be the rate from Minneapolis to Aberdeen, upon that basis? A. You would have to give me distances in such cases; have you got them?

Q. I don't know whether I have got that or not (referring to folder), it is about 288 miles; is that right? A. That is about right to Aberdeen; it would be about 90 cents per 100 pounds. It is 287.6 miles from Minneapolis to Aberdeen, and it would be ten miles further from St. Paul.

Q. It would take the 290 mile rate? A. It would take the 290 mile rate, that is 90 cents per 100 pounds.

Q. Now, what is the distance from Minneapolis to Wolsey? A. 63.7 miles further than to Aberdeen; it is 351.7 miles.

Q. That would take the 360 mile rate? A. If there is not a 355 mile rate it would.

Q. Look at that inter-state distance tariff and give us the rate as shown by the inter-state distance tariff from Minneapolis to Wolsey? A. $1.04 that would be; the distance is figured by the way of Aberdeen; possibly the mileage by the way of Ramsey and Southern Minnesota might be a little less, and in that case the rate would be a little lower.

Q. What is the distance from Minneapolis to Andover? A. 258.8 miles.

Q. And what is the rate upon the distributing tariff from Minneapolis to Andover? A. 82 cents from Minneapolis.

Q. What is the rate from Minneapolis to Newark, on the branch north of Andover? A. 82 cents.

Q. It is the Andover rate? A. It seems to be the Andover rate; it happens to be in this case.

Q. What is the distance from Andover to Newark? A. 38.4 miles.

Q. What would be the inter-state distance tariff rates from Minneapolis to Andover, distance 258 miles? A. It would be 84 cents.

Q. From Minneapolis to Newark, distance 296 miles? A. 296 miles would be charged as 300 miles; 92 cents.

Q. Mr. Bird, you understand the method by which the earnings of your line by which freight traffic on your line is apportioned to South Dakota lines? A. Yes, sir.

Q. It is apportioned on the mileage basis? A. Upon the basis as prescribed by the National Convention of Commissioners.

Q. That seems to have been one act of the railroad commissioners that was satisfactory to the Milwaukee road?

A. I have not been advised on that point. I understand it to be on a mileage basis.

Q. All of the traffic in South Dakota is what you would call distributive traffic? A. Everything that we move is distributed.

Q. But you have no through freights in South Dakota? A. Yes, we have freight trains running through and connecting with other lines in other states.

Q. You have no through lines running beyond the State of South Dakota, except a few miles in North Dakota, have you? A. Why, yes; certainly.

Q. Where? A. The James river line.

Q. It runs a few miles into North Dakota? A. If you mean by through business, we have traffic passing over the rails in South Dakota, that has neither origin nor destination in South Dakota.

Q. That would be your joint traffic with the Northern Pacific? A. Partly so and partly our local traffic originating locally in North Dakota.

Q. The volume of that however is not very great? A. Of what?

Q. Business originating at your stations in North Dakota that passes through South Dakota? A. I do not think there is very much of that; could not be very much.

Q. Do you know the distance from Chicago to the nearest station in South Dakota on your system? A. I think it would be just above Sioux City at the crossing of the Big Sioux, but I am not sure; it might be just east of Canton, between Canton and Rock Valley.

Q. I think that is the point? A. I do not know just what that distance is; the distance from Chicago to Canton is

probably more than from Chicago to a point immediately west of Sioux City; I should say about 520 miles.

Q. Assuming that the distance from Chicago to the east line of the State of South Dakota, at points where your lines enter the state, would be about 515 miles— A. It would be a little more than that; 520 to 530 miles.

Q. — and the distance from Chicago to Council Bluffs, you say is what? A. 488.4 miles.

Q. Now, Mr. Bird, upon freight from Chicago to a station twenty miles beyond your connection with the Union Pacific say Papillion, Nebraska, state the basis for the division of those earnings? A. We get sixty-three and five-tenths per cent.

Q. And the Union Pacific, for the twenty miles haul, would get thirty-six and five-tenths per cent.? A. Yes, sir.

Q. Now, for a haul into the state of South Dakota 540 miles from Chicago, your inter-state tariff rate would be $1.24, would it not? A. About $1.24 would be the inter-state distance tariff rate.

Q. And of that sum, your lines east of South Dakota, would receive 515 miles and the lines in South Dakota would receive twenty-five miles, supposing the distance to be accurately stated? I understand that the revenue derived on the whole would be divided on the basis of the actual distance carried? A. It would not be divided at all; there is only one sum $1.24 which belongs to the Chicago, Milwaukee and St. Paul Company; that is all of it; it is indivisible.

Q. In estimating the amount of earnings which your line in South Dakota are entitled to, you would give the South Dakota lines credit for their per mile share of that, of the

$1.24? A. I would not do anything at all, because that is entirely foreign to my business.

Q. But when you say it is divided on a mileage basis, that is what you mean? A. It is not divided at all; it is as indivisible as anything can be.

Q. I understand you to say, that, in estimating the earnings in South Dakota, it was estimated on a mileage basis? A. It is estimated so, but the money is not divided with anybody.

Q. I did not mean that; now, in estimating how much of this $1.24 is earned by the lines in South Dakota, you would take the total distance of 540 miles as representing the $1.24, and then you would assign to South Dakota the twenty-five mile share of that $1.24 as compared with the whole distance hauled? A. I testify this—

Q. Hold on; you have stated that in these estimates the mileage basis was used; now, I want to know what you mean by the mileage basis? A. I mean the usual mileage basis; that it is prorated upon the actual mileage; one mile is just the same as any other mile.

Q. So that the revenue derived is divided by the total number of miles? A. It is not divided at all.

Q. In this calculation? A. It is not divided, in the calculation, at all.

Q. Then you don't make any calculation? A. We simply make an estimate of mileage and each mile is credited with its earnings, it being of just as strong earning capacity as any other mile; it is to find out approximately what is earned in each state, but there is no division.

Q. I understood you to say yesterday, Mr. Bird, that the freight from South Dakota cost you more money than it did

from the Union Pacific or Northern Pacific? A. I testified yesterday, or I intended to, that I believe it costs us more, per ton, to get freight out of South Dakota than it does to get freight from the Union Pacific or Northern Pacfic. That was my idea yesterday and is my idea now.

Q. But you did not make that statement from a careful examination of that, did you? A. I make that statement from a general knowledge of the business; a knowledge of the facts. We have had to build and we have to maintain the railroad in South Dakota and we do not have to maintain any part of the Northern Pacific or Union Pacific; we are not liable for their taxes, for their liabilities, for their maintenance, for their construction or anything else and if they are not solvent, it don't cost us anything. That cannot be said of our own lines in South Dakota.

Q. Let me ask you, Mr. Bird, if this freight that is delivered to you by the Union Pacific and which they haul twenty miles, you give them thirty-six and five-tenths per cent.? A. On paper, yes, sir; but as a matter of fact, I don't know as we have had a pound of freight over our lines from Papillion.

Q. But that is the rate? A. No; the rate has not been testified to.

Q. But the percentage of division? A. Yes, sir.

Q. If the rate was $1.24, then the division would be seventy-eight and seven-tenths cents to the Milwaukee road and forty-five and three-tenths cents to the Union Pacific, would it not? A. I have not figured it; I presume that would be about right; if the rate from Chicago to Papillion was $1.24, and if there was any business between those points, we would receive 78.7 cents per 100 pounds for our haul to Council Bluffs.

Q. And the Union Pacific would receive the balance? A. The remainder of the $1.24.

Q. Now, upon the same haul, for the same distance, in South Dakota, twenty-five miles divided upon the mileage basis you would receive $1.18 for the 515 mile haul while the South Dakota lines would receive 5.74 cents? A. I did not figure that; the St. Paul Company would receive $1.24 for the service and the line from Chicago to the destination would get all of the money; you are talking about the distribution of earnings. There is none as I testified before. The line in South Dakota would get credit for such share of that $1.24 as was derived by computing it, on the actual mileage basis, by the shortest haul.

Q. Do you know what the total freight revenue of your system was for the year 1897? A. The freight earnings of our road for the year ending June 30, 1897, was $22,104,802.66.

Q. Do you know what the average freight earnings per mile of road of your system was last year? A. I do not think they are kept in that form; I am not sure about that, I have not seen the report.

Q. I show you the report, and ask you to state the amount from that? A. The total freight revenue per mile?

Q. Yes? A. $3,585.35.

Q. That would be an average of $298.70 per month, would it not? A. Approximately; very nearly that average per month.

Q. Do you know what the freight revenues from business furnished by the South Dakota lines amounts to? A. I can ascertain from the records.

Q. I show you a statement prepared by the auditing department of your company and ask you to state the volume

of freight traffic originating or terminating in South Dakota for the month of September, 1897, as shown by that statement? A. This appears to be a statement showing the revenue derived by the system on freight, which had origin or destination in South Dakota, during the month of September, 1897; it amounted to $424,852.70.

Q. Apportioning that to the miles in South Dakota it would exceed the average freight earnings of the system of $298.70 per mile would it not? A. I do not think it would; I do not know. I do not find anything in that statement that would justify that assertion. I do not know but it is true.

Q. This shows a volume of business of $424,852.70 for that month? A. Yes, sir.

Q. For how many miles in South Dakota? A. About 1,101 miles I think.

Q. About 1,100 miles? A. Yes, but that traffic was not done simply over 1,100 miles; it was done over 6,152 miles.

Q. That would make an average upon the system in South Dakota of $386 per mile, would it not? A. No, sir.

Q. The volume of business furnished to the system? A. I don't think so; that is freight received and freight forwarded, but that freight received was not furnished by the lines in South Dakota. It was furnished by other parts of the system.

Q. If this $424,852.70 was apportioned to the mileage in South Dakota it would amount to $386 per mile, would it not? A. If you were to give the Dakota mileage credit for the entire revenue, why it is only a matter of computation of course. If you were to divide the amount of revenue stated here, to the actual number of miles in South Dakota, I pre-

sume the result would be as you have stated it, but that traffic consists of traffic furnished to the system in South Dakota and also of traffic furnished by lines outside of South Dakota, divided into separate classes.

Q. But your company would be deprived of the entire volume of business, if your lines were cut off at the state line of South Dakota, would it not? A. No, sir.

Q. Why not? A. Because, it could go in by some other means if our lines were cut off; it would end our haul on it, but it would have to go over into the State of South Dakota by some means of transportation.

Q. Supposing that were the fact, and that you only hauled this traffic to the state line, $424,852.70 worth of traffic for the month, how much of that would your have to give to the connecting line upon the same basis that you do business with the Union Pacific and Northern Pacific? A. It would depend entirely on circumstances; if there was no connecting line we would not have to pay anything.

Q. If there was not any connecting line? A. Yes.

Q. Then you would not have that business? A. We might have it up to the state line and then it might go in by wagon or in some other manner.

Q. As a matter of fact, you would have to make a division of those earnings with some other transportation company, the same as you do with the Union Pacific and the Northern Pacific and your other connecting lines? A. No, sir; by no means.

Q. Do you mean to say you can get along without it? A. Not as a matter of fact, at all; the circumstances and conditions which regulate or fix the divisions we have with the Union Pacific might not exist anywhere else, and they

do not exist anywhere else, exactly. It does not follow that the conditions existing at Kansas City or Omaha would exist at Canton, South Dakota.

Q. Mr. Bird, with the competing lines in South Dakota, for Chicago, St. Paul and Minneapolis business, the Great Northern at Aberdeen, Huron, Sioux Falls and Yankton, and the North-Western which took practically all of the territory which your line covers and with the Illinois Central and the Burlington into Sioux Falls, do you mean to say that if your line terminated at the state line that you could secure this traffic upon a mileage basis? A. I did not say that; you asked me, if there were no railroads in South Dakota.

Q. I said if you had none? A. I did not understand it that way.

Q. Then with this competition for this business, that I have stated, you would not expect to get it, upon a mileage basis, would you? A. It all depends upon circumstances.

Q. How about those circumstances? A. There are a great variety of circumstances that regulate the matter of divisions, but we might very readily and very easily concede to a connecting line more than the mileage pro rate, and yet get the business cheaper than we now get it from our own Dakota lines. Very much cheaper. We might afford to pay them seventy-five per cent. of the rate if we did not have to support the property itself. In some cases, we could pay them 125 per cent. of the revenue if we were not called upon to sustain the road, and yet save money.

Q. You have a joint traffic arrangement with the Great Northern at Sioux Falls, have not you, by which you haul their Chicago business? A. I do not think so.

Q. Have you any arrangement to haul any other com-

pany's freight from South Dakota to Chicago? A. I do not think so.

Q. Assuming that the month of September, 1897, was an average month, then the volume of business for the year would be a little over five millions of dollars, or about twenty-three per cent. of the total freight revenue of your entire system, would it not? A. The September earnings is not a fair average, but if it was an average it would yield in round figures five millions of dollars per annum, which would be between twenty-two and twenty-five per cent. of the annual freight earnings of the system.

Q. And your mileage in South Dakota is about seventeen per cent. of the entire system? A. It is approximately.

Whereupon the further taking of testimony in said cause was continued to Monday, January, 24 A. D. 1898, to be taken up at the same place at the hour of 10 o'clock a. m. of said day.

January 24, 1898, 10 o'clock a. m.

A. C. Bird was temporarily withdrawn from the witness stand to allow other witnesses to be examined.

ALBERT J. EARLING, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. What position do you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. Second vice president and general manager.

Q. How long have you held those positions? A. Since December, 1895.

Q. Prior to that time what position did you hold? A. The position of general manager from 1890 to December, 1895.

Q. The position of vice president was added in December 1895? A. Yes, sir.

Q. Prior to your appointment as general manager, what position did you hold? A. That of general superintendent, 1888 to 1890.

Q. Prior to that time, what position did you hold? A. I was first assistant general superintendent from 1886 to 1888.

Q. Prior to that time what position did you hold? A. That of assistant general superintendent in charge of certain of the lines east of the Mississippi river and certain of the lines west of the Mississippi river. My jurisdiction at that time did not cover all the lines. It only covered certain lines of the company, that is, from 1884 to 1886.

Q. I will now go back to the time of your entering the services of this company? When was that? A. I entered the service of the Milwaukee and Minnesota Railway, now a part of the Chicago, Milwaukee and St. Paul Railway in the spring of 1866.

Q. In what capacity were you first employed in the railway service? A. That of a telegraph operator and timekeeper and clerk to the master mechanic at what was then called North Milwaukee, Wisconsin.

Q. That was in— A. That was in the spring of 1866.

Q. Do you remember how long you served in that capacity? A. I served some few months in that capacity and I then left there and took service with what at that time was known as the Milwaukee and Prairie Du Chien Railroad Company, now a part of this company's system. I served there as night operator at Prairie Du Chien, Boscofel,

and in various other places. In the fall of 1866 I left the service of that company and took service with the Chicago and North-Western Railroad Company at Watertown.

Q. Watertown, Wisconsin? A. Yes, sir. I remained with that company until 1869.

Q. In what capacity? A. As telegraph operator, ticket clerk and office clerk. In 1869 I re-entered the service of what was then the Milwaukee and St. Paul Road at Watertown, Wisconsin. I remained there about a year and a half. I then went to Milwaukee in the general office as assistant train dispatcher of what was then the La Crosse Division, and is now the La Crosse Division. From that time until 1873, I continued as assistant train dispatcher. In 1873 I became the chief train dispatcher of that division and continued as such until 1878. From 1878 until 1882 I was assistant superintendent of the line from Chicago to Milwaukee, known as the Chicago Division, from Milwaukee to La Crosse, known as the La Crosse Division, and rfom Milwaukee to Prairie Du Chien, known as the Prairie Du Chien Division, and also a line from here to Savanna, which is known as the Chicago and Council Bluffs Division, in Illinois.

Q. Which runs from Chicago to Savanna? A. Yes, sir.

Q. Crossing the Mississippi river there? A. Yes, sir. In 1882 I was transferred to Iowa. During the construction of the line from Marion, Iowa, to Council Bluffs, I was then made superintendent and served as such on that line from Savanna to Council Bluffs and the line from Marion to Ottumwa from 1882 to 1884. In 1884 I returned to Milwaukee to take the position of assistant general superintendent in charge of a part of the company's lines, which position I held until 1886. From 1886 until 1888 I was first assistant

general superintendent with jurisdiction over all lines. From 1888 to 1890, general superintendent; from 1890 until 1895, general manager; and from 1895 to date, second vice president and general manager.

Q. When you held the position of train dispatcher and assistant train dispatcher, what were your duties of the position, in a general way? A. The movement of trains and the movement of the traffic, both freight and passenger, over the lines over which I was dispatcher, was my principal business. That is the principal business of a train dispatcher.

Q. When you held the positions of assistant general superintendent and general superintendent, what were the duties of your positions then? A. The maintenance and operation of the road, in brief.

Q. As general manager what were the duties of your position? A. They still remained the same, maintenance and operation in addition to such other duties as were assigned from time to time to me by the president.

In your present position as vice president and general manager, what are your duties? A. In the absence of the president they comprise all the duties of the president. When the president is here himself I have charge of the maintainence, operation and the traffic, in a general way, and such other duties as are from time to time consigned to me by the president.

Q. During all the period of your railway services from 1866 to the present time, have you been required, in order to perform your duties, to consider, examine and determine questions effecting the transportation business upon this railway, or upon the railways with which you have been connected? A. I may say that the transportation business

has been my principal business during my connection with railroads. I have devoted more time perhaps to the subject of transportation than to anything else.

Q. During all that time has it been your duty to consider and have you considered the question of the efficient and economical conduct of the transportation business? A. That has been my principal business. I have made that more of a study than any other subject in connection with the management of the road.

Q. During the time you have held these positions you have mentioned, has any portion of this time been construction? A. A very large part of the time has been on construction since my connection with the line.

Q. What connection have you had with the construction? A. My experience in construction began in about 1880. My first experience was in connection with the construction of the line from Sparta, Wisconsin, to Viroqua, Wisconsin. Then from Byron, Illinois, to Kittridge, Illinois; then from Marion, Iowa, to Council Bluffs, Iowa; then from Cedar Rapids, Iowa, to Ottumwa, Iowa. During the construction of the road from Marion to Council Bluffs, Iowa, and from Cedar Rapids to Ottumwa, Iowa, I was in actual charge of the laying of the track, building of the stations, round houses and side tracks, and all the necessary facilities to prepare the road for regular operation.

Q. Are you familiar with the facilities, equipment, supplies, labor and all the appliances necessary in the operation of a railroad? A. Entirely so. Especially in connection with the operation of the Chicago, Milwaukee and St. Paul Railway.

Q. Are you familiar with the requirements that rest upon the railway company in the maintenance of its road, its

buildings, engines, equipment, motive power and facilities of all kinds. A. Yes, sir. I have had charge of the maintenance and operation of the company's lines for many years, and am entirely conversant with it.

Q. Is it possible for anyone charged with the duties of maintenance, operation, providing of equipment, and the conduct of the transportation business, to do so successfully, without the most careful and laborious effort in the direction of efficiency and economy? A. No, sir. It requires years and years of experience to operate and maintain a railroad efficiently, to render proper service and do it economically.

Q. And it requires not only experience but it requires constant and vigilant attention, does it not? A. It requires constant care and attention almost day and night.

Q. Mr. Earling, I will ask you whether, in your judgment, based upon your acquaintance and familiarity and experience in the railroad business, the Chicago, Milwaukee and St. Paul Railway Company has been judiciously, honestly and economically operated? A. I consider that the Chicago, Milwaukee and St. Paul Railway has been efficiently and thoroughly well managed, and in as economical a manner as it was possible to manage the property and keep it in a safe and proper condition.

Q. Mr. Earling, are you able to state the cost per annum to maintain and operate the lines of the Chicago, Milwaukee and St. Paul Railway Company in South Dakota? A. Yes, sir; I can give you that information in reference to South Dakota, or any of the lines.

Q. How are you able to state the cost of the operation and maintenance of the lines in South Dakota? A. From the actual amount expended, and where those figures cannot

be obtained from my experience and knowledge of the property and its requirements from year to year and from time to time.

Q. Well, in computing the cost per annum of maintaining and operating the South Dakota lines, what item of expense do you include? A. The items of expense come under the general head of maintenance, operation, administration, and so on. In detail, I will hand you a paper which contains all of those items, together with the total sum.

Paper produced by the witness marked by the special examiner for identification "Exhibit 22."

Q. Mr. Earling, the first item of your computation is, replacement of track, $201,143.47. Explain fully what expenses enter into that item. A. The expenses that enter into that item, or, of which this item is made up, include all the labor that is employed in superintending and repairing the tracks, such as roadmasters, also section foremen, the extra gangs that are usually employed, crossing watchmen, maintenance of frogs and switches, railway crossings signs, in fact, all crossing signs of the various kinds, hand-cars, push cars, replacement of tools and the repair of telegraph wires (that portion only of the repair to telegraph lines which is furnished by the railway company). These amount to the total sum of $201,143.47, for one year on the lines in South Dakota, for the year ending June 30, 1897.

Q. Are all those items necessarily expended in keeping the roadbed and the lines of South Dakota in a safe and proper condition for the transaction of the business of the railroad company? A. All of them are necessary to keep the property and lines in a safe and proper condition for the trasaction of the business of the railroad company.

Q. The second item is renewel of rails, $157,930.90. Ex-

plain in the same manner the items which enter into these figures. A. In the item of renewals of rails are included the rails which are necessary for replacement each year, together with the joint fastenings which consists of the angle bars, track bolts, nuts, washers, and whatever else enters into the replacement of rails. The rails on the South Dakota lines require replacement on an average, at least once in sixteen years. That is a very conservative statement, and the process of this replacement is going on all the time.

Q. The next item is renewal of ties, $206,596. Explain that item. A. The number of ties in the company's track, in the State of South Dakota, is 3,562,000. These ties have to be renewed at least once in ten years. They do not actually last that long, but I have taken it to be once in ten years, therefore, one-tenth of them must be replaced each year, in order to keep the track safe. That is equivalent, to 356,200 ties each year. And such renewal amounts to $206,596 per annum.

Q. The next item is repairs to bridges, $56,545.27. Explain that? A. This is the actual amount that was expended on the lines in South Dakota, during the year ending June 30, 1897, for repairs to bridges.

Q. The next item is repairs to fences, amounting to $11,307.60. Explain that? A. Under the head of repairs to fences are also repairs to cattle guards. Cattle guards, as you understand, are a part of the fences. It is necessary, of course. If we did not have cattle guards, stock would get on the track. Therefore, cattle guards come under the head of repairs to fences. The company has 505 miles of track in South Dakota which is fenced. That means 1,010 miles of a single line of fence.

Q. Because it is fenced on both sides? A. Yes, sir.

According to our experience covering a great many years, we find it is necessary to renew our fences at least once in fifteen years. It costs $133.20 per mile for material and labor, and, if renewed once in fifteen years, the 1,010 miles at $133.20 per mile would cost for both labor and material the sum of $9,057.60 per annum. Then there are 1,000 cattle guards which have to be renewed once in eight years, according to our experience, which is equivalent to 125 per annum, at $18 each, which is the actual cost, this amounts to $2,250 per annum. Therefore, the total amount under the head of repairs to fences is $11,307.60 per annum.

Q. The next item, numbered 6, is repairs to buildings, $60,630.30. Explain that? A. This is arrived at by taking the original cost of all the company's buildings in South Dakota, which was $940,606; according to our records and our experience covering a great many years, it requires an expenditure of at least five per cent. per annum, to maintain the buildings on the railroad. The structures under the head of buildings, includes everything except bridges. It includes turntables, stock yards, water tanks, platforms of all kinds, and, in fact, every construction of every kind. An expenditure of five per cent. per annum of this amount, together with the wages of four pump repairers, which are employed on the South Dakota lines, and which is charged to this account, amounts to a total of $50,650.30.

Q. Item No. 7, repairs to locomotives. Explain that? A. This amount is arrived at by taking the total cost of repairs to locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. The total locomotive miles made in South Dakota, multiplied by the cost per mile on the entire system gives the amount for the year ending

June 30, 1897. I ought, perhaps, to add in this connection that it costs considerably more to maintain locomotives in South Dakota than it does in any of the other states in which we operate. That is due to the water. The water in South Dakota is so bad, contains so much alkali that it is necessary to wash out the engines every 300 miles, and sometimes oftener. The quality of the water is such that the flues of the boilers become incrusted with this alkali and other impurities in the water, so that more thorough washing is necessary, and more frequent renewing of the flues of the boiler becomes necessary, and more repairs to the fire box and boiler is necessary than in states where the water is better. In Wisconsin, for instance, we do not have occasion to wash the boilers more than once in perhaps two or three thousand miles, so that when the cost per mile for repairs to locomotives on the system is adopted, it is very much in favor of South Dakota.

Q. The cost per mile on the actual miles run? A. The actual miles run.

Q. Not the mileage in the state, but the miles run by the locomotives? A. The total miles run by all the locomotives on the entire system and the actual miles run by all locomotives in the State of South Dakota. The amount is $48,602.23.

Q. Item No. 8, repairs to cars, $59,350.70. Explain that. A. The cost of repairs of cars is arrived at in exactly the same manner as the cost of repairs to locomotives. The amount for repairs to cars was $59,370.17 for the year ending June 30, 1897. The repairs to locomotives, the amount for which is given, is also for the year ending June 30, 1897.

Q. The repairs both of locomotives and of cars is counted on the miles run by the locomotives and by the cars? A. Yes, sir.

Q. That is how you arrive at the cost of repairs? A. Yes, sir. We first ascertain the cost per mile of repairs of the locomotives on the entire system.

Q. Per mile? A. Yes, per mile run on the entire system. The cost of repairing cars is ascertained by arriving at the cost per car mile on the entire system, then the actual locomotive miles and the actual car miles run in South Dakota is multiplied by such cost per mile.

Q. Item No. 9, repairs to tools and machinery, $2,292.01. A. This charge to tools and machinery was apportioned upon exactly the same basis as the repairs to locomotives and to cars. These tools and this machinery are used exclusively in the repairs to locomotives and of cars.

Q. Item No. 10, administration, $51,918.41. Explain that? A. The total administration expense of the system was about $900,000, in round numbers, per annum. This item of $51,918.41 is the amount apportioned on a basis of earnings to South Dakota lines, as reported by the auditor, as compared to the total earnings of the system. That is, the relation that the earnings as reported bear to the total earnings of the system produce this amount.

Q. Now what is the basis of administration expenses? What does it include? A. It includes the management and the general offices; foreign agencies and advertising, legal expenses, and the New York office expenses. The amount is made up of those items.

Q. Item No. 11, station service, $98,907.30. Explain that? A. This includes the wages of the men employed at stations the traveling auditors, the local general agent and the freight and passenger solicitors, yard switchmen and watchmen, and it is the actual amount which was expended by the company in South Dakota, for the year ending June 30, 1897.

Q. Item No. 12, conductors, baggagemen and brakemen, $95,345.49. Explain that? A. This was also the actual amount expended during the year ending June 30, 1897, in South Dakota.

Q. Item 13, engineers, firemen and wipers, $100,575.95. Explain that? A. This was also the actual amount expended on the lines in South Dakota, during the year ending June 30, 1897. It is the actual amount paid out in wages to engineers, firemen and wipers employed on the South Dakota lines.

Q. Item No. 14, train and station supplies, $23,711.11? A. This represents the actual value of the supplies that were furnished to trains and stations in South Dakota, and the general office supplies of this office here, which latter part is apportioned in the same manner as administration expenses, namely, on a basis of the earnings of South Dakota, as reported, compared to the total earnings of the entire system.

Q. In case lines in South Dakota run across South Dakota into other states, how have you apportioned the supplies to them? A. They are apportioned on the actual mileage in South Dakota; for instance, a train runs between some point in Minnesota and some point in South Dakota, and we will say it is fifty miles in Minnesota and fifty miles in South Dakota. It is arrived at by the actual miles it makes in each state.

Q. Item No. 15, coal consumed, $229,839.45. Explain that item? A. This represents the actual amount of coal used in South Dakota, and actual cost of the same, for the year ending June 30, 1897.

Q. Item No. 16, oil and waste, $6,696.98. Please explain that? A. This is the actual value of the oil and waste used

on locomotives, cars, etc., in the State of South Dakota, during the year ending June 30, 1897.

Q. Item No. 17, personal injury, $1,343.34. Explain that? A. I would like to say in that connection that while this was the actual amount that was paid out for personal injuries during the year ending June 20, 1897, in the State of South Dakota, it is ridiculously small, and it is far below what the average would be. It is impossible to operate 1,100 miles of railroad with personal injuries amounting to only $1,343.34, but it is the actual amount that was paid out during the year in South Dakota.

Q. That amount includes actual payments, and does not include claims that are now pending? A. It does not.

Q. Do you know of any such claims? A. Yes, sir; I know of two quite large ones, for $15,000 each, another, I think, is for $2,000. They are pending now. There are a number of other claims not yet adjusted and on which suits have not yet been brought.

Q. Item No. 18, damages to property, $1,617.50. A. Damage to property includes damage from fire, which the railroad company occasionally sets out, and especially in South Dakota. In years past we have had a great deal of trouble, and paid large sums of money in settlement of such claims. This amount of $1,517.50 is the actual amount that was paid during the year ending June 30, 1897, but it by no means represents the average that the company has paid during the past ten years, or that it will probably pay during the next ten years. It is far below the average.

Q. Do you know whether it was among the reasons it was so smaller last year, was because of the large amount of rain which kept the vegetation moist, so it would not burn so readily? A. That is one of the reasons, probably

one of the principal reasons why there have not been more fires.

Q. Item No. 19, loss and damage to freight and baggage, $3,630.43. Explain that? A. This is also the actual amount paid out during the year ending June 30, 1897, in South Dakota.

Q. For loss to freight and baggage? A. Yes, for loss to freight and baggage in the State of South Dakota.

Q. Item No. 20, taxes $98,482.68? A. This represents the actual amount paid for the year ending June 30, 1897, in South Dakota.

Q. Item No. 21, insurance, $8,460.94? A. This sum represents the premiums which were paid at the rate of 47 cents per $100. The insurance covers the buildings, cars and contents. The reason this amount is so small is because the property is not insured for its full value. It is insured for less than one-third of its value.

Q. And, Mr. Earling, is it considered a judicious expenditure by railway companies to insure their perishable property, and do well managed railway companies have most of that property insured? A. All the railway companies so far as I know, insure their property, not to the full value but to some extent, and we have always considered it prudent to keep a certain line of insurance.

Q. Item No. 22, mileage of cars, $4,100.02? A. This represents the proportion of the mileage balance against the company for the year ending June 30, 1897, on the actual number of miles made by foreign cars in the State of South Dakota.

Q. Mr. Earling, explain what is meant by mileage paid on foreign cars. Perhaps the court may not understand as

you do. A. It is the practice of railroads to pay on ordinary freight cars six-tenths of a cent per mile for the use of cars belonging to other railroads, and other railroads pay us the same amount. On refrigerator cars, the rate is one cent per mile. Now, then, at the end of each month we arrive at the total number of miles made by our cars on foreign roads, and we also arrive at the total number of miles made by foreign cars upon our road. The difference between the two sums is the balance either for or against the company. In our case it is against the company. Now, assuming that this balance against the company for the year amounts to, we will say, $200,000, South Dakota is charged with its proportion of that balance, on the basis of the actual miles made by foreign cars within the State of South Dakota.

Q. The theory upon which one company pays to another company mileage on its cars, on our lines, for instance, is that we have the use of their cars, we collect the freight, and we ought to pay them something for the use of their cars, and save the cost of loading and unloading? A. Yes sir, that is the theory upon which payment is made for the use of foreign cars.

Q. Item 23, sleeping car expenses, $862.49? A. This amount represents the wages, supplies and cost of washing linen, and cleaning, in proportion to the number of miles run by sleeping cars in the State of South Dakota, as compared to the miles run in the adjoining state, namely, Minnesota. We operate a line of sleeping cars between St. Paul and Aberdeen. The line in South Dakota is charged with its proportion of this cost on the basis of the actual number of miles run in South Dakota.

Q. The Chicago, Milwaukee and St. Paul Railway Company instead of arranging with sleeping car companies for

sleeping cars upon its lines, operate sleeping cars of its own, does it not? A. Yes, sir; it has done so since 1890, with the exception of one line, which was formerly the Milwaukee and Northern Railway. On this line the Pullman Company had a contract at the time the line was acquired by the Milwaukee and St. Paul Railway.

Q. Have you footed up the various items on the paper you have produced, so as to arrive at the aggregate of the cost of maintaining and operating the lines of the Chicago, Milwaukee and St. Paul Railway, in the State of South Dakota, for the year ending June 30, 1897, and if so, state what the aggregate amount is. A. Yes, sir, I have. The total cost of maintaining and operating the lines of the Chicago, Milwaukee and St. Paul Railway in South Dakota, for the year ending June 30, 1897, amounts to $1,520,309.92.

Q. State whether this paper and the aggregate you have read fairly shows the cost of operation and maintenance of the lines in South Dakota for the period named? A. Yes, sir; except in many instances I think it is rather below actual cost; for instance, personal injuries, the amount paid for personal injuries, damages to property, and various other items, are far below the average and I regard it on the whole as a very conservative statement. In other words, if you will permit me to say so, I would not be willing to maintain and operate these lines for that sum of money. I should not care to take the contract to do it.

Q. In the operation of lines in South Dakota there are certain extraordinary expenses, are there not, which are not included in the figures you have given, such as snow blockade, washouts, and items of that kind? A. This statement does not include extraordinary expenses such as we had, for instance, last winter in removing snow, and then in the

spring, in repairing washouts. The expense of removing snow last year was very large, and the damage from high water in the spring was still larger. There is nothing included in this statement for these extraordinary expenses that were incurred for removing snow or repairing of the roadbed. In the item under the head of repairs to bridges, the expenses incurred last year are included, but the damage that was done by the high water was not so much to bridges, in fact, it was very small. The principal damage and chief damage was to the roadbed. By roadbed I mean everything below the ties, except bridges. Bridges are not included, and do not come under the head of roadbed.

Q. Was this statement made up by yourself or under your personal supervision? A. Partly by myself and the balance under my personal supervision.

Mr. Peck: I now offer this table in evidence, Exhibit 22.

EXHIBIT 22.

STATEMENT OF THE COST TO MAINTAIN AND OPERATE THE LINES OF THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

1.	Repairs of Track	$201,143 47
2.	Renewal of Rails	157,930.97
3.	Renewal of Ties	206,596 00
4.	Repairs of Bridges	56,445 27
5.	Repairs of Fences	11,307 60
6.	Repairs of Buildings	50,630 30
7.	Repairs of Locomotives	48,602 23
8.	Repairs of Cars	59,370 17
9.	Repairs of Tools and Machinery	2,492 01
10.	Administration	51,918 41
11.	Station Service	98,907 30
12.	Conductors, Baggagemen and Brakemen	95,345 49
13.	Engineers, Firemen and Wipers	100,575 95
14.	Train and Station Supplies	23,711 11

15.	Fuel Consumed	229,839 45
16.	Oil and Waste	6,996 88
17.	Personal Injuries	1,343 34
18.	Damage to Property	1,617 50
19.	Loss and Damage to Freight and Baggage	3,630 34
20.	Taxes	98,482 68
21.	Insurance	8,460 94
22.	Mileage of Cars	4,100 02
23.	Sleeping Car Expenses	862 49
	Total Expenses	$1,520,309 92

Mr. Null: To this exhibit the defendants object upon the ground that there has been no competent evidence submitted as to the facts purporting to be disclosed by this statement, or the data from which it was complied, and as not the best evidence.

Exhibit 22 received in evidence.

Q. Mr. Earling, are you acquainted with the relative transportation expenses of local traffic and through traffic? A. Yes, sir; I have given that subject a great deal of study for many years.

Q. Please state in your own language the relative cost of conducting local and through traffic and the reasons which make them differ, if they do? A. I have found that it costs at least twice or three times as much to do the local business as it does to do the through business. Twice or three times in proportion to the earnings to do the local business as to do the through business: for instance, in doing the local business you start your train out from its terminus with a very small amount of freight, perhaps one, two or three cars, as the case may be, perhaps no cars at all, and, as the train proceeds to the end of the run, it picks up freight and cars here and there. Now, if there is traffic enough on the line to fill that train out to the capacity of the locomotive

when it shall reach the end of its run, then starting in with little or no freight from the beginning of its run and ending at the destination of the train at the end of its run with a full train, you have an average of one-half load over the entire part of the line over which this train runs. You will have not have had more than half a load for that locomotive spread over the entire run of the train. Now, if, as happens to be the case in South Dakota, for at least nine months in the year, there is not sufficient traffic to fill the train going over the entire run, the train frequently arrives at the end of the run with only twenty-five per cent. of a full load. Sometimes as low as ten per cent. and sometimes nothing. Therefore, the expense in proportion to the earnings is increased three, four, six and sometimes ten times. It is only during the season in which the grain is moved in South Dakota, which is about three months, that you can rely upon getting a full train when you reach the end of the run. That means only a half train over the entire road, while for the balance of the year, the remaining nine months, it does not average twenty-five per cent. of a full train, and frequently as I said, ten per cent. of a full train. It, therefore, shows conclusively that it costs in proportion to the earnings at least two or three times as much, and some railroad experts have put it at four times as much, and even six times as much, to do the local business than it does to do the through business. By the through business I mean you start out a train from the beginning of its run loaded to the capacity of the locomotive, and it goes over the entire freight division with a maximum load, while on the other hand, as I said, during the three best months of the year it will not be more than half loaded over the division, and for the remaining nine months of the year, it will have very much less than that.

Q. The ability of the railroad company to load what you call through trains or revenue earning trains from the beginning to the end of the run, depends on the amount of business to be carried on, does it not? A. It depends entirely upon that. The expense and cost of running a train over the road is but a trifle more when the engine is loaded to its capacity than when it is running light. As I said before, that trifle consists in the additional amount of fuel that is used, and in the additional number of cars that pass over the track, thereby causing a little more wear and tear. These amounts are so insignificant compared to the difference in the earnings of the train, that they do not amount to anything.

Q. The wages paid to engineers, firemen, conductors and brakemen are the same on a train which is loaded to its full capacity as upon a light train, is it not, practically? A. No, sir.

Q. In what respect do they differ? A. The wages paid to trainmen on through trains are somewhat less than are paid to the men who are on trains that do a local business.

Q. The time consumed in handling the business is another element entering into the expense, as a general thing, is it not? A. Yes, sir. It frequently occurs that a train which is required to do way work, switching, loading and unloading freight at the stations along its run is delayed so that it consumes more than ten and a half hours in making a run of 100 miles. In that case, overtime has to be paid while in the case of a through train there is no occasion for such delay, for they have practically no work to do, at stations, and they pass over the division and there is hardly any overtime because they do it easily in less than ten hours, but it often happens that what we call way trains are one

or two hours more than the ten and a half hours making the 100 miles. The payment of the trainmen and enginemen is based on the miles that they make or on a mileage basis.

Q. The amount of tonnage carried on any given train is also an element to be considered in arriving at the cost of operation? A. It is the principal element.

Q. And what is the principal thing to be considered by a railway operator in conducting his traffic operations, in respect to the loading of his trains? A. The constant effort of all transportation men, and operating men, is to have full trains. By that I mean to have every locomotive loaded to its capacity, in going over the line, and to have as few light trains as possible. I would like to cite an instance in connection with our South Dakota line, just how it operates and why it costs so much more to do the business than it does on the lines where there is plenty of traffic, and enough freight to load the engines to their capacity. You are familiar, no doubt, with the branch line this company owns, extending from Andover South Dakota to Harlem, North Dakota, the same being a short distance in North Dakota, only a few miles, on that line at the present time we are operating a train three times a week, that is, it goes up and back the same day and does that three times a week. The traffic is so light that if that train was operated once in ten days it could do all the business of the line, but we have to run it three days in the week, and consequently the amount of freight and the number of passengers that we carry is very small; yet, the expense for wages, fuel and supplies are exactly the same. They are a great deal more than they should be, because we run three trains a week, instead of one in ten days. We could haul all the freight and carry all the passengers, if we ran the train once in ten days.

Q. Have you any statistics showing the average number of tons of freight you carry on your South Dakota lines, or any of them? A. I have that information for a few of the divisions: I had it made up especially for this occasion. From Mitchell to Sioux City, a very small part of which line is in Iowa, only four or five miles, I think, the balance is in South Dakota. These statistics, which are carefully and correctly made, show that during the month of December, 1897, the average number of tons of freight per train for the month was ninety-six tons, while on the divisions where we have through business, I have taken the line from Chicago to Milwaukee, the average there per train for the same month was 434 tons; on the line from Milwaukee to La Crosse it was 260 tons for the same month; and on the line from La Crosse to Minneapolis for the same month the average was 286 tons. Now, the line from Mitchell to Sioux City is rather better than the average of all South Dakota lines in furnishing traffic. It is rather above the average. There are many South Dakota lines which would show a much smaller average then ninety-six tons.

Q. Well, have you the information as to any other divisions? A. No, I have not that information regarding other divisions.

Q. Not here, of course? A. No, sir.

Q. Have you got the division from Madison to Woonsocket? A. I think I have that. On the line between Madison and Woonsocket, which is all in South Dakota, the average per train for the month of December was seventy-two tons of freight.

Q. You have made up the figures on these divisions for the purpose of testifying here this moraing? A. Yes, sir; we make up figures of this kind here and there in order to

check the business of the various divisions, to see whether we have full trains or whether they are only partly filled, but I have not worked it up with reference to any other divisions except those I have named.

Q. Now, I will ask you to state, Mr. Earling, whether the freight trains conducting the business of this company in South Dakota are properly classed as local trains or through trains? A. They are all local trains. Occasionlly, however, during the fall months when there is some live stock moving from Chamberlain, which comes from across the river, and when grain is moving freely, we sometimes have a full train out of Eureka, and we have occasionally a full train of stock out of Chamberlain, but that happens only occasionally during the three fall months, say, September, October and November.

Q. The freight trains in South Dakota, whether they are engaged in an exclusive local business or are carrying what is known as inter state traffic, are all operated in the manner that local trains are operated and must be so for the reasons you have given? A. It must be so because there is not sufficient traffic to run through trains, except the instances I have stated that occur in the fall months, occasionally with wheat from Eureka, and occasionally with stock from Chamberlain. I will state further that as the freight is concentrated at Aberdeen, from the various lines running into Aberdeen, we get full trains out of Aberdeen eastward, that is, we get full trains during the time the grain is moving for the three months I have mentioned.

Q. Do the figures you have given by way of comparison on different divisions include all freight trains, whether technically classed as local or through trains? A. They include all freight trains that run over the divisions I have mentioned during that month of December.

Q. A through train is a train which is made up at a certain terminal and run right through to its destination without stopping for any intermediate business? A. Yes, sir; that is a through train.

Q. While a local train, whether it has some through business, or not, is a train that stops either to take on or let off freight? A. That is correct.

Q. You have stated that it costs two or three times as much in proportion to the earnings derived from the traffic to conduct local business than it does to conduct through business. Is that estimate fairly applicable to the business of the South Dakota line, as compared with the system as a system? A. It is a conservative statement, I should say. We have kept some statistics to show what it costs for the wages of engineers and firemen, the wages of conductors and brakemen, the cost of fuel, and the cost of supplies for locomotives and caboose cars; and those items only, nothing else entering into it, to haul 100 tons of freight one mile. These statistics show that on the line extending from Mitchell to Sioux City, it cost during the month of December, 1897, for those items which I have mentioned, 23.88 cents to haul 100 tons of freight one mile.

Q. That is simply for those particular things? A. For those particular items. While on the entire system during the same month the cost for those same items was 12.93 cents, nearly twice as much on the South Dakota line as it is on the system. I think I could further illustrate by assuming that I was engaged in the teaming business between two given points, and we will assume that the maximum load for a team and wagon was 3,000 pounds; now if I started out from one point with a few hundred pounds of goods, and go along and pick up a few hundred pounds more

and so on, by the time I have reached my destination I then have a full load: I have hauled with that team the equivalent of one half a load for the entire distance. Now, it has cost me just as much as if I had hauled a full load from the beginning to the end. Now, if as happens to be the case in South Dakota for nine months in the year, I only get goods enough so I have hauled but twenty-five per cent. of the 3,000 pounds, it is very plain that it increases the cost per 100 pounds or per pound, as the load diminishes, or as it decreases below the maximum of 3,000 pounds. It is just exactly the same in the operation of trains, with the exception that it takes a little more fuel and there is a little more wear and tear in hauling a full train, than there would be to haul a lighter train. but that additional cost for the additional fuel and the additional wear and tear is so insignificant as compared to the difference in the earnings that it ought not to be taken into consideration.

Q. If a man with a team could haul 3,000 pounds at once, could have the whole 3,000 pounds loaded when he was ready to start, he could haul it in one trip, but suppose they got only 1,000 pounds to the team, he would have to make three trips? A. Yes, sir.

Q. That is similar to the situation where there is not freight sufficient to make a full train? A. Yes,s ir; where you are compelled to run a train for the public. As I stated before between Andover, South Dakota, and Harlem, a few miles in North Dakota, we run a train three times a week; while all the business could be done if you ran a train once in ten days.

Whereupon the further hearing was continued to 2 o'clock p. m.

Monday, January 24, 1898, 2 p. m.

Mr. A. J. EARLING, resumed the witness stand and testified as follows:

Direct Examination continued by Mr. Peck.

Q. How many states does the railway of the Chicago, Milwaukee and St. Paul system extend into and through? A. Eight states.

Q. Name them? A. South Dakota, North Dakota, Wisconsin, Minnesota, Iowa, Michigan, Illinois and Missouri.

Q. What proportion of the trains operated upon the system are engaged in inter-state traffic; I mean upon the entire system? A. Nearly all of them; I should say ninety-five per cent. of them have more or less inter-state traffic in them.

Q. For what purpose are accounts kept of the earnings and expenses in the different states? A. Only for the purpose of conforming to the laws of the different states and the orders of the various state commissioners.

Q. Can the earnings and expenses of maintaining and operating an inter-state railroad system be accurately apportioned upon geographical lines, state or otherwise as respects inter-state traffic? A. No, the divisions made upon geographical lines as I have stated have been made as requested by railroad commissions and in compliance with state laws in the various states in which we operate, and upon the basis, as I am informed by the auditor of a rule established by a convention of the state railroad commissions, or upon some arbitrary basis. Such reports are not necessary to determine the earnings and operating expenses

of the system, and they would not be made except as required by law or by the orders of the commissions of some states, and in some states where earnings must be reported for the purpose of taxes on gross earnings, an apportionment may be made as I have testified to, based upon the volume of traffic, that is, the number of tons of freight hauled in given trains between given points. That does not depend upon geographical lines, but chiefly upon the volume of business. It applies particularly to the cost of transportation. For instance, the figures which I presented this morning and which are made up from actual experience and expenditures in the operation of this railroad, they show beyond any question that it actually costs more to operate the lines in South Dakota than is charged against them under a train mileage basis as prescribed by the convention of railroad commissions and carried out in our reports to the state. In the same manner, maintenance charge of track, structures and equipment would be larger than I have made it, but for the fact that I have treated it as a part of the system having the advantage of shop facilities and materials of the system. My figures show that the real expenditures on the cost of operation and maintenance in South Dakota for the year ending June 30, 1897, was several hundred dollars thousand greater than is charged against the South Dakota lines under the train mileage system. The result of this is that instead of there being any ground for complaint, or injustice or unequal treatment, South Dakota has received an enormous advantage to which it is not fairly entitled. If the South Dakota lines, instead of being a part of the Chicago, Milwaukee and St. Paul system, were an independent line, local to the State of South Dakota, the cost of maintenance and operation must necessarily be considerable larger. The statement I made this

morning is upon a very conservative basis, and it gives the lines in South Dakota the advantage of the facilities this company has in other states.

Q. Is it not true that in operating a large system, economy and saving of expenses can be introduced that are not possible in the operation of a smaller system, in other words in operating a large system which has large shops and facilities, all the parts of the system get a benefit from those shops at a much less proportionate expense than if it had to maintain at its own expense shops and facilities of equal efficiency? A. There can be no doubt about that; for instance, if the Chicago, Milwaukee and St. Paul Railway Company were to maintain the necessary shops and have the necessary tools and machinery with which to do the work and make the repairs upon locomotives for every 1,100 miles of its system it would require at least six of such plants. For the South Dakota lines having in round numbers 1,100 miles, such a plant would be required, but in connection with the system for the operation of that line, that work can be done at our principal shop at a much less expense than it could be done if we were required to have separate shops in South Dakota. There is not enough work to keep such shops in South Dakota busy during the entire year, or to keep the machinery busy during the entire year, and hence the plant together with its tools and machinery would be idle a greater part of the time.

Q. Is not the same true in the matter of supplies which every railroad must keep on hand; I mean the general supplies; all material for use on the system? A. Yes, it is equally true of the supplies. The company maintains only three stores for its entire system of over 6,000 miles, and only one of the three is a general store. Now, if the South

Dakota lines were to be made and operated as an independent railroad, it would be necessary to maintain a store in South Dakota which would have to carry a stock of all the materials that we now carry in our general store for the entire system. Of course not quite so much, but of all of the kinds.

Q. Of equal variety? A. Of equal variety, that is it, and it would be much more expensive than it is now under the present system.

Q. Mr. Earling, I will ask you to state whether there is not another economy in a large system over a small system based upon the large amounts of supplies that are to be purchased for a large system, the cost of the acquisition being less when large quantities are purchased, when large purchases are made, than when small purchases are made; is not that the case? A. It is a well known fact that you can buy cheaper in large quantities than you can in small quantities; that is true in all kinds of business. We are able to buy steel rails for less money than a small road can purchase them for the reason that we buy in larger quantities. South Dakota receives the benefit of such lower prices that the company pays for its materials and supplies.

Cross-Examination by Mr. Temple.

Q. In the statement which you have produced, marked Exhibit 22, showing the cost of maintaining and operating the lines of the Milwaukee system in South Dakota, you have an item of $201,000 in round numbers for the repairs of track; is that actual or estimated repairs of track for the year ending June 30, 1897? A. There are several items which make up this amount; the principal item is that of labor which is as near actual as can be made. The balance

of it is material for replacement and maintenance of frogs, switches, highway crossings, crossing signs, hand-cars and push cars and replacement of track tools and repairs of the telegraph lines. The maintenance of frogs, switches, highway crossings, crossing signs, hand and push cars and the repairs of tools are based upon our actual experience of what it does cost from year to year to replace and maintain those items.

Q. That is, in South Dakota? A. In South Dakota as well as on the system, but particularly in South Dakota.

Q. What per cent. of the entire cost is the item of labor? A. In connection with repairs of track?

Q. Yes? A. In connection with item No. 1?

Q. Item No. 1, repairs of track? A. In item No. 1, 7 roadmasters, at $1,200 each per annum, amounting to $8,400; I am speaking now of South Dakota lines. 125 track sections, the labor of which amount to $970 each per annum; this is what is called the regular section force. Then the usual extra gangs employed in repairing and strengthening embankments, surfacing track, etc., setting up and taking down snow fences and such other work as extra gangs are usually called upon to do, that amounts to $46,395 per annum. One crossing watchman who is employed in Aberdeen, $420 per annum; these items comprise the labor, which amounts to $174,465.

Q. What makes up the remaining $25,000 of this item No. 1, repairs of track? A. First, maintenance of frogs and switches. There are 690 frogs on the lines in South Dakota, twenty per cent. of which have to be renewed each year. This we have from actual experience. This is equal to 138 frogs per annum at $18 each, this amounts to $2,484 per annum. The next item is guard-rails which are used in con-

nection with switches. There are 1,380 guard rails on the lines in South Dakota. These require renewal once in ten years, equal to 138 per annum at $3.10 each, amounts to $427.80 per annum. There are 690 sets of switch ties and head-blocks which require renewal of twelve and one-half per cent. per annum, equal to eighty-six sets per annum; these cost $46.43 per set and the amount is $3,992.98. There are 690 switch stands with the necessary rods, chairs, etc., and the renewal of these is five per cent. per annum equal to thirty-five per annum, which, at $20 each, amounts to $700 per annum. Ten railroad crossings which the Chicago, Milwaukee and St. Paul Company has to maintain; these require renewal once in five years, equal to two per annum at $100 each, amount to $200 per annum. The total then, of maintenance of frogs, switches and railroad crossings amount to $7,805.78.

Now comes the salvage. The salvage in frogs amounts to 55,200 pounds; guard rails, 15,200 pounds; of switch stands, rods, etc., 7,000 pounds; railroad crossings, 2,400 pounds, making a total of 79,800 pounds, at $4.50 per ton at Mitchell, this amounts to $179.55. That deducted from the total of $7,805.78, leaves $7,626.23. Under the head of repairs of track as per item No. 1 is also charged the maintenance of highway crossings, the necessary crossing signs, whistling posts, mile boards at railway crossings where we cross other railroads and various kinds of signs.

There are 1,200 highway crossings and the renewal of the planks for these crossings require 48,000 feet of planking per annum, at $13 per thousand feet at Mitchell, amounting to $624. There are 1,200 highway crossing signs and the renewal of these is ten per cent. per annum which is equal to 120 per annum, which at $5 each, amounts to $600. There are forty railroad crossing signs which the Chicago, Mil-

waukee and St. Paul Company is required to maintain; they are ordinarily called "one mile signs", the renewal of these is ten per cent. per annum which is equal to four, at $6 each which amounts to $24. There are forty railroad crossing "Stop" signs and the renewal of which is ten per cent. per annum, which, at $6 each, amounts to $24. There are 2,000 whistling posts, two for each crossing outside of cities, renewal ten per cent., which equals 200 per annum, at $1 each amounts to $200.

256 station mile boards, renewal ten per cent. per annum, equal to twenty-six per annum, at $6 each, $156. 510 mile posts, renewal ten per cent. equals fifty-one per annum, at $1 each, $51. 1,100 sets of rail-rests posts, renewal, ten per cent., equals 110 per annum, at $1 each, equals $110 per annum. Ten sets of timbers to sustain railroad crossings which the Chicago, Milwaukee and St. Paul Railway Company is required to maintain, the renewal of these occurs once in five years, which equals two per annum, at $23.20 each, amounts to $46.40. 100 miles of snow fence, renewal twelve and one-half per cent. per annum, which is equal to eight miles per annum, at $364 per mile, amounts to $10,800. Track tools, hand-cars, push cars; there are 152 hand-cars used in the State of South Dakota, at $35 each, the renewal is eight per cent., which amounts to $657.60 per annum. There are 131 push cars, at $19 each, the renewal amounts to eight per cent. per annum, which is equal to $199.12. The valuation of track tools for section gangs and extra gangs amounts to $13,249. The replacement of these is equal to twelve and one-half per cent. and amounts to $1,656.12 per annum. Telegraph department, the labor furnished by the railway company for the repairs of telegraph lines is charged to repairs of track, under the heading of item No. 1, and

amounts to $2,520 per annum. The foregoing items, together with the labor amounts to $201,143.47.

Q. Do I understand you to say that your estimate for the repairs of track shown in item No. 1 of this statement which you furnished, is based upon the actual cost of maintaining your track in South Dakota for a number of years? A. For labor, did you say?

Q. Yes; repairs of track? A. Yes; it is based upon the number of men that we have heretofore employed from year to year.

Q. In South Dakota? A. In South Dakota; this is the average. However, it does not include the extraordinary expenses that were incurred last year by reason of the snow blockades and the washouts; snow blockades in the winter and washouts in the spring; I have not included that.

Q. There have been snow blockades and washouts on your line prior to last winter? A. Yes, sir.

Q. Does not the repair of track made necessary by those washouts enter into this experience in former years upon which you base your estimate now? A. We have not included the extraordinary expenses that were incurred at any time in the past in connection with these severe snow blockades and severe washouts.

Q. Well, when you repair your tracks after washouts how is that charged up in your accounts? A. It is charged to repairs of tracks.

Q. To repairs of tracks? A. Yes, sir; that is to say, that portion which is called the roadbed, not including the bridges, the latter is charged to repairs of bridges.

Q. So the repairs occasioned by washouts go into your account of repairs of tracks and bridges? A. The ordinary

and light washouts that we have now and than, go in under the repairs of tracks and bridges, but in my statement, Exhibit 22, I have not included the extraordinary expenses that were incurred last year on account of the snow blockades and washouts because they do not occur every year. I do not think it would be fair to include that in my statement.

Q. They have occurred prior to 1897; extraordinary washouts. A. They are not included in arriving at the average number of men that we have employed in years past, in making up that statement.

Q. I say, prior to 1897, you have had what you call extraordinary washouts? A. Yes, sir.

Q. And snow blockades? A. Yes, sir.

Q. And the repairs made necessary by these accidents have gone into your account of repairs? A. Do you mean into this account?

Q. The general account? A. Into the company's general account?

Q. Yes? A. Yes, sir.

Q. Prior to 1897 you have had extraordinary washouts occasionally, have you not? A. Yes, sir.

Q. And that has been charged to the account of repairs? A. On the books of the company it has been charged to repairs, but it has not been charged to repairs in this account, Exhibit 22.

Q. Have you any separate account for the repairs made necessary by these extraordinary accidents, washouts, to which you have testified? A. We don't keep a separate account, but I can ascertain what they are, what the extraordinary expenses were for any year by reason of very serious washouts.

Q. If those repairs all go into the same item under the same general heading, how can you eliminate all the repairs made necessary by those extraordinary accidents, from the ordinary repairs? A. I know how many men are employed on every section in the State of South Dakota, for the winter months, for the spring months, for the summer months and for the fall months; I direct the number that shall be employed on every section; I direct the number that shall be employed in the extra gangs and the number of extra gangs that may be employed to do the extra work, therefore I know how many men are employed on the lines in South Dakota.

Q. Did you compile this item No. 1, repairs of track yourself? A. Yes, sir.

Q. You compiled it from what source? A. From my personal information, my present knowledge and from what we have employed in the past, the number of men that we have employed in the past and from the materials that we have furnished.

Q Do I understand you made the compilation personally, yourself? A. Yes, sir; I did.

Q. And you did not make it from the records of the auditor's office? A. No, sir.

Q. Did you refer to his records at all in making this estimate? A. I did not.

Q. You did not? A. I did not; no, sir; I think I should add, it is made up from the records that I have in my own office and not from the auditor's records.

Q. Well, on these records or accounts which you have in your own office, is there any distinction made between the ordinary repairs and the repairs made necessary by extraor-

dinary accidents, such as washouts? A. Yes, sir; this statement here represents only the number of men that are ordinarily employed in the absence of any serious washout or snow blockades.

Q. Coming now to item 2 of renewals of rails which you have estimated at $157,930.97; I ask you if the cost of that item of repairs is actual or estimated? A. That is as near actual as it can be made. It is rather under than over. I state here that the company has 1,101 miles of main track in South Dakota and from the experience that we have had in the matter of renewals of rails in South Dakota I have stated that the rails on an average have to be renewed or replaced once in every sixteen years on an average over the entire lines in South Dakota. On some of the lines in South Dakota, they have to be renewed much oftener then that. On others, not quite so often, but the average is once in every sixteen years which is rater low. They will not last on an average sixteen years. For instance, on the line between Big Stone City, South Dakota, and Aberdeen, South Dakota, that road was constructed in 1881 and we began as early as 1887 to replace the rails on that part of the line. We have up to this time replaced many of the rails that were laid in 1887 and 1888, the second time.

Q. On that same line? A. On that same line we have replaced them twice and the road was constructed in 1881, The rails there in many places have been replaced twice. Now, that would not be true of one of the very light traffic lines; there the rails would last much longer, but on the lines where the traffic is heavier they will not last anything like sixteen years as is shown by the experience which we have had on the line between Big Stone City and Aberdeen. The same may also be said of the line between Canton and

Mitchell and also between Yankton and Sioux City and between Sioux Falls and Sioux City, so that in talking of the average life of the rails in South Dakota, we find that sixteen years is a very conservative statement.

Q. Do I understand you that the rails do not last as long in South Dakota as they do in other states? A. Oh, yes; they last longer because the traffic is much lighter.

Q Bad water has no effect on the rails? A. No.

Q. What sized rail do you use on your South Dakota line? A. Our standard for the present for the South Dakota line is sixty pounds per yard.

Q. And how many tons of rail would that make to the mile of road? A. In round numbers, ninety-four tons.

Q. Now, in this statement or estimate have you charged the actual cost of the rails or the cost of the rails together with the labor of laying the rails on the track? A. I have charged both the actual cost of the rails and the labor of laying the rails which is shown separately.

Q. Are they both included in item No. 2, which is called renewal of rails? A. Item No. 2 is $157,930.97, is it?

Q. Yes? A. Yes, sir; they are. I might add for your information that an allowance has been made for the salvage or scrap recovered from the old material.

Q. I understand you to say that you constructed your line in 1881? A. About 1881.

Q. And you begun renewing your rails in 1887? A. In 1887, we began the renewal of rails.

Q. What kind of rails did you first use in constructing that line to Aberdeen? A. To the best of my knowledge they were part sixty pounds per yard, and the balance fifty-six pounds per yard.

Q. Were not the rails used in the original construction of that Aberdeen line, iron rails? A. They were.

Q. Were they not second-hand rails? A. No, sir; they were not; they were new rails according to the best information I have.

Q. Did you not use a lot of second-hand iron rails in constructing your line to Aberdeen; rails that had been formerly used on some other portion of your system and torn up and carried there for that purpose? A. I have no personal knowledge, but the chief engineer informs me that they were new rails.

Q. And with what weight of rails did you replace them in 1887? A. With sixty pound steel rails.

Q. And that is the size of your present rails on that line? A. That is the weight of the rails now used on all lines in South Dakota.

Q. Just state the gross amount which you have charged as the cost of the rails and which you have carried into item 2? A. The gross amount of cost of rails, angle-bars, bolts, nuts, washers and spikes, $187,561.45; the labor to distribute and lay sixty-eight and eighty-one one-hundredth miles of new rails and the picking up of sixty-eight and eighty-one one-hundredths miles of old material at $250 per mile amounts to $17,203.12. The salvage that was recovered from the old rails, old splice-bars, bolts, spikes, etc., was $46,833.60.

Q. Can you tell me how many tons of rails you used in making up this item No. 2? A. 5,488 tons.

Q. That was sixty pound, new steel rail? A. Yes, sir.

Q. What was the cost per ton? A. $24.50; this includes the cost of transportation to Mitchell and other points.

Q. The amount charged for the renewal of ties is actual, as I understand it? A. No, sir; it is below the actual. I have estimated that the ties require replacement once in ten years. They do not last ten years, but I have estimated it at ten years so as to make it conservative.

Q. Mr. Earling, does it cost more to renew or replace rails in South Dakota than it does on other portions of your railway system? A. It does not.

Q. How do you explain the fact that you estimate the cost of the renewal of rails on your South Dakota lines in 1897 at $157,930.97, and in your printed report to your stockholders you state that the cost of renewal of rails for the entire system is only $681,274.36, making your South Dakota lines cost more in proportion for that item than the entire system? A. We laid more rails in South Dakota last year than I have estimated here that it will require. We laid last year in South Dakota a little over 125 miles of rails. I have taken what the average would be; I have not charged up in this statement the amount which was laid last year.

Q. On which one of the South Dakota lines did the largest amount of replacement of rails occur? A. On the Southern Minnesota division.

Q. How many miles? A. The replacement there was greater than on any other of the lines; a little over thirty-seven miles, nearly thirty-eight miles.

Q. Was that road originally built with second-hand rails? A. I cannot say of my own knowledge, but the chief engineer informs me that it was not.

Mr. Temple: I prefer not to have that in the record what the chief engineer told you.

Q. Do you know whether in constructing any of its lines in South Dakota, the company used second-hand rails? A. Not to my knowledge.

Q. You say that the average life of a tie in South Dakota is ten years? A. Yes, sir.

Q. What kind of ties have you got on your roadbed in South Dakota? A. We have hemlock, oak and cedar and a small per centage of pine ties.

Q. What kind of ties have you used chiefly in your South Dakota line? A. We are now using chiefly cedar ties.

Q. The amount which you have given as cost for renewal of ties on your South Dakota lines is actual, I believe? A. It is based upon the ties having to be be renewed every ten years, or ten years being the life of a tie, but it is less than the amount expended because the ties do not last quite ten years.

Q. Less than the actual amount expended in 1897 for that purpose? A. I do not know what the expenditures were for ties in 1897, but it would not give you a fair average; there might have been a very large amount put in last year and the amount might have been small. These lines in South Dakota were constructed all the way from 1879 to 1886 and the ties frequently wear out all at once; where they are all of one kind, you can see they would all wear out at once. We had that experience on our line to Eureka where a few years ago nearly all of the ties had to come out and had to be replaced by new ones, so you can only arrive at it by taking the average. It would not be fair to take any one year because it might run away over ten per cent. Some other year immediately after the renewal had taken place it would be less, but the average is rather more than ten per cent.

Q. I understood you to say that the amount given in your estimate for the cost of renewal of ties was actual and not an estimate and I want to get at the fact; I understand you to say now it is not actual, but an estimated amount? A. It is not actual; it is estimated upon the experience that we have had with the lasting qualities of ties on the Chicago, Milwaukee and St. Paul road and on the South Dakota line for a great number of years.

Q. Now, this estimate, is it intended to represent merely the approximate cost for renewals of ties in South Dakota for the year ending June 30, 1897, or an average year? A. It is intended to give the cost for an average year.

Q. So that if the total cost for renewal of ties on your entire system for 1897, was only $829,000 in round numbers, your estimate of $206,000 for the South Dakota lines would be more than its proportion for that year, there being over 6,000 miles of road in your entire system and only 1,100 miles in South Dakota? A. That general statement does not include the cost of transporting those ties to South Dakota; there is quite a large difference.

Q. Then South Dakota is charged not only with the market price of these ties, but also with the cost of transporting them to South Dakota? A. In my statement, Exhibit No. 22, I have figured the value of the ties delivered in South Dakota. That includes the cost of the ties with the freight charges added.

Q. Then South Dakota, so far as its ties are concerned at least, does not derive any benefit from being a part of your great system, does it? A. It does under the statement made by the auditor. In his statement it derives a benefit. Under my statement I endeavored to show what it actually cost to replace the ties in South Dakota; the freight charges must therefore be added in order to arrive at the actual cost.

Q. But that could not be the actual cost, the amount given by you; it could not be the actual cost to South Dakota, in 1897, unless it cost more in proportion on your lines in South Dakota than for your entire lines, could it? A. As to the actual number of ties used in South Dakota last year, this estimate, Exhibit 22, is not actual; it is an average of what is being or will be used year in and year out, one year with another and to that estimate of the number that are used and are required one year with another, is added the freight charges.

Q. According to the rates which you charge other people? A. No, the rates that we charge ourselves.

Q. What rate is that? A. It represents the actual cost of the service.

Q. Well, what is that rate on ties, for instance? A. We figure it about at six-tenths cents per ton per mile.

Q. How many ties do you figure to the mile of your road? A. 3,000.

Q. And in making up this item 3, did you take merely the main line or the main line together with the side-tracks and spurs? A. That includes the main line, side-tracks and all tracks in South Dakota; all of our tracks in South Dakota.

Q. How many bridges have you on your line in South Dakota, Mr. Earling? A. I cannot give you the number; I can get it for you if you desire it.

Q. Have not you the record? A. I have, but I have not the information at hand.

Q. Can you tell me what those bridges originally cost? A. No, sir; I cannot; I have not the information here.

Q. Is item 4 for repairs of bridges which appears in this Exhibit 22, actual or estimated? A. It is actual.

Q. And do you think that would be the average annual expense for repairs of bridges upon your South Dakota lines? A. No, I think it would be a little less than the amount shown here because in this estimate—

Q. You think the average cost of those repairs would be less than you have shown in that statement? A. Yes, sir; because, as I have stated, before, the expenses for repairs of bridges from wash-outs that we had last spring is included in this $56,000; such repairs as were made up to June 30, and I think it is probably two or three thousand dollars more than it would amount to on an average taking it one year with another.

Q. Then your item 4 includes repairs of your bridges in South Dakota and covers the repairs made necessary by these extraordinary accidents, washouts, etc? A. It does.

Q. As well as your ordinary repairs? A. Yes; the extraordinary repairs amounted to about $2,000 or $3,000 up to June 30th.

Q. Have you more bridges on your South Dakota line in proportion to the mileage than in the remainder of your system? A. No; I do not think so.

Q. As a matter of fact, you have not as many, have you, Mr. Earling? A. I should have to look up the records.

Q. You do not know? A. I should have to look up the records to ascertain how many lineal feet of bridges we have in the State of South Dakota in order to answer that question correctly.

Q. Can you tell me the number of bridges in South Dakota? A. No, sir; I cannot; I have not the information at hand.

Q. Do you know the number of bridges on the entire system? A. I do not.

Q. Are there any large streams in South Dakota which you were obliged to bridge, and which you have bridged? A. Yes, sir; there are quite a number.

Q. Name them? A. The Sioux river is one; we cross that a great many times; quite a number of times in South Dakota. The James river is another which we cross any number of times. The Vermillion is another which I call to mind, then there are any number of smaller streams and sloughs and dry runs which we cross with bridges of considerable length.

Q. How do the fences on the South Dakota lines compare in extent or cost of construction with the fence on other portions of your system? A. I don't know just what you mean by the word extent.

Q. Well, I mean quantity? A. About one-half of the company's lines in South Dakota are fenced. In other states, practically all of the lines are fenced. The cost of constructing the fences is the same as it is in other states, except the addition of the freight charges on the material brings it up somewhat higher, and in my statement, Exhibit 22, I have added the freight charges to the cost of the material.

Q. So South Dakota would not derive any benefit from being a portion of your great system, so far as repairs of fences is concerned, would it? A. It would not if it were operated as an independent line.

Q. On the basis of this statement, that you have submitted here? A. This statement is submitted to show what it would cost for the South Dakota lines, if those lines were operated independently.

Q. Your fences last as long in South Dakota as they do in other states, do they not? A. They last just as long in South Dakota as they do elsewhere.

Q. Do ties and fences last longer in a dry or wet climate? A. If there is any difference, it is so slight that it has not become apparent to us; I do not know that there is any difference at all.

Q. Then the item of $11,307.60 which you have charged for repairs of fences on your South Dakota lines in 1897 is actual, is it? A. It is not actual, because the repairs to fences in South Dakota have been light up to within a few years ago, but that is the average cost per annum on our system to maintain fences and cattle guards. Repairs of cattle guards come in under the head of repairs to fences.

Q. I understood you to say and I so noted the fact, the amount which you gave for repairs of fences was actually expended in South Dakota? A. For the cost of fences or maintaining them?

Q. Yes; I want to know whether that is correct or not? A. No, sir; I did not say that was the amount actually expended last year.

Q. That is an estimate? A. That is an estimate on a basis of what it costs to maintain our fences on the Chicago, Milwaukee and St. Paul Company's system.

Q. For the year 1897? A. For an average year.

Q. Well, would 1897 be an average year? A. No.

Q. Why would it not? A. Sometimes we postpone certain repairs to fences and certain other repairs, and then double up the following year.

Q. Did you postpone such repairs in 1897 or not? A. We did.

Q. You did postpone? A. Yes, sir.

Q. I discover that in your printed report to stockholders you have only charged up $48,673.56 for repairs of fences on the whole system. If only one-sixth of the whole mileage is in South Dakota, that state therefore would only be chargeable with one-sixth of the entire repairs for your system, would it not? A. As you may know, business for the year ending June 30, 1897, was not very good and we postponed such repairs and as much work as we possibly could. Next year it may be double or treble the amount, or it may be four times.

Q. Did you postpone repairs of buildings for 1897 for South Dakota? A. Yes, in all of the states.

Q. In all of the states? A. Yes, sir.

Q. Then is the amount which you have given in your statement for repairs of buildings actual or estimated? A. It is an esttmate upon long experience which we have had on our system of the cost of maintaining and keeping in repair the buildings and structures of this company. By "all buildings and structures," I do not mean to include bridges.

Q. Then this statement which you have produced here and which is marked as Exhibit 22, does not show the actual cost of maintaining and operating your lines in South Dakota for the year ending June 30, 1897? A. Many of the items show the actual cost during the year. Other items necessarily have to be estimated because one year's maintenance is not a fair criterion; you must arrive at that by what it cost the road for a number of years back; the average is arrived at in that way. The company might expend in South Dakota next year or some year fifteen per cent. on the original value of its buildings, but that would not be a

fair average. It would not be fair to say that it costs that much every year. You can only arrive at that by ascertaining what it has cost for a series of years to maintain buildings and structures, aside from the bridges, and then take that as an average, and the average will be the same in South Dakota that it is in the other states on the Chicago, Milwaukee and St. Paul Company's system.

Q. But this statement which you have furnished to us does not even show South Dakota's proportion of these repairs on the mileage basis, does it? A. I have not shown anything on a mileage basis.

Q. Now, then, will you explain the object of this statement which you have produced here; what does it show or what is it worth to us in this case? A. The object of this statement is to show how much it actually would cost one year with another to maintain and operate the Chicago, Milwaukee and St. Paul Company's lines in the State of South Dakota.

Q. Not estimated on a mileage basis? A. Not estimated on a mileage basis. All of the items where the actual amount expended could be ascertained, have been given and where the actual amounts would not answer the purpose and would not furnish a proper criterion, we have taken the average which is based upon our experience for many years past of what it has cost on the road as a system.

Q. It does not even represent the amount with which South Dakota would be chargeable as a portion of your entire system either on an actual mileage basis or on any other basis, does it? A. It represents the amount with which it is chargeable one year with another.

Q. As a part of your system? A. Operated as a part of our system?

Q. Yes, or an independent line? A. As a part of our system or as an independent line, one year with another of maintaining and operating the lines in South Dakota and a very conservative estimate. All of the items which can be arrived at, for instance, the wages of track men, the wages of station men, the wages of conductors, baggage and brakemen, the wages of engineers, firemen and wipers, and the wages of all other employes are actual.

Q. One year with another? A. I have only estimated such items as can not well be arrived at by taking one year, because one year would not be a correct basis upon which to make a statement of this kind.

Q. When you say taking one year with another, you mean an average, don't you? A. I mean the average for a series of years.

Q. You could only get an average by taking a series of years? A. Yes, I desire to say, an average for a series of years.

Q. What buildings have you in South Dakota upon your lines in that state? A. We have station houses, engine houses, section houses, hand-car houses, freight houses, water tanks, which come under the head of buildings. Do you desire buildings only?

Q. Yes, those structures that are included or referred to in item 6? A. That includes turntables, water tanks, stock yards, platforms, and in fact all structures except bridges and culverts.

Q. Now, have you a record or inventory of those buildings such as are referred to in item 6? A. I have no such inventory at hand; I can produce it if it is desired.

Q. Can you favor me with an inventory of your buildings

and structures in South Dakota which would go under the heading of item 6, and the original cost of those structures? A. I can, but not this afternoon.

Q. I shall be glad to have that. A. It may take me some time to procure that information.

Q. You do not know what the original cost of those buildings are? A. The original cost of those structures?

Q. The original cost of those structures? A. That would come under the Leading of item "6," $940,606.

Q. Now, is that actual or estimated? A. That is actual according to the information from the chief engineer.

Q. Do I understand, then, that the actual cost of structures on your South Dakota lines referred to in item "6" of your statement was $940,606? A. Yes, sir.

Q. Is it not a fact, Mr. Earling, that you have stations, fewer stations in South Dakota in proportion to the actual number of miles of road than you have in any other of the states through which your road is operated? A. In some states we have fewer stations than we have in South Dakota; Michigan, for instance, I should say we have not so many buildings per mile as we have in South Dakota.

Q. How many miles of road have you in Michigan? A. 152 miles.

Q. How many lines? A. We have one line. We have a number of branch lines in other states where there are no more buildings per mile than there are in South Dakota

Q. Is it branch lines? A. The Waukon line in Iowa, it has fewer buildings per mile than the lines in South Dakota.

Q. How long is that? A. Twenty-two miles.

Q. How many miles of road have you in Iowa, for instance? A. 1,550 miles, about.

Q. And have you not fewer stations in South Dakota per mile than you have on your line of road in Iowa? A. No; condidering the large number of branch lines which we have in Iowa, I should say that they would average about the same.

Q. Is not it a fact that your station buildings in South Dakota are cheap structures? A. No, sir; they are better and more expensive than the average stations in Iowa or Wisconsin—the average country station. The station buildings in South Dakota are all two story buildings, while a large number of the station buildings in other states are but one story buildings. The two story buildings in South Dakota were made necessary to provide a place for the agent and his family to live, which was not necessary in many of the other states because they could find houses in which to live.

Q. Could you tell me how many tons of new rails were actually laid on your South Dakota lines last year? A. The number of miles of rails that were replaced in South Dakota for the year ending December 31, 1897, was 125 miles and 851 feet; these were not all new rails. Most of them—I think all were steel rails that had been taken up from other lines and which had been straightened and the ends sawed off where they had been kinked a little and re-drilled and put in first class condition.

Q. Were they all steel rails? A. Yes, sir; they were all steel rails.

Q. And at what price were they charged up? A. At $24.50 per ton, delivered in South Dakota.

Q. Where did these second-hand rails come from? A. From various parts of the system, principally from such lines as required heavier rails for the heavier traffic These

sixty pound rails were taken up from those lines, and the perfect rails were selected. They were sent to the rail mill where any little imperfections were removed, such as a kink at the end, and a small part of the ends were sawed off; they were re-drilled, straightened and put in first class condition and then shipped out to South Dakota.

Q. How long had these rails been in use upon other portions of your system? A. Some seven years, some eight years, more or less, I cannot tell you exactly.

Q. And what weight did you say they were; did you say they were all sixty pound rails? A. To the best of my knowledge they were all sixty pound rails.

Q. And is the amount which you have given as the cost of repairs of locomotives in item No. "7" actual or estimated? A. It is actual and is based upon the mileage, upon the locomotive miles made in the State of South Dakota. It is arrived at in this way; we find the total locomotive miles run on the entire system, the total cost of repairs to locomotives, and then we ascertain the cost—per locomotive—and multiply that by the actual locomotive miles run in South Dakota In regard to the repairs to locomotives it is proper that I should say that this is very liberal to South Dakota. It costs more to maintain and keep in repair a locomotive which runs in South Dakota than it does in any other state in which we operate because the water is so bad, and furthermore, there is no charge made for running the locomotive to and from the shops.

Q. And after that explanation, do you say the amount given is actual or estimated? A. It is really less than the actual cost to keep the locomotives in repair in the State of South Dakota.

Q. I want to get at what you mean by the term actual or

estimated as applied to this statement, and I ask you again if the cost for locomotive repairs is actual cost or estimated cost? A. It is less than the actual cost.

Q. Will you say whether it is actual or estimated? A. It represents the actual cost as shown by the cost per mile on the system in South Dakota.

Q. Then it is possible, according to your opinion to localize the expenses of locomotive repairs for your system or divisions in any one state; that is, the actual locomotive repairs for your line in any one state can be exactly ascertained? A. They can be ascertained by applying to the repairs the average cost on the system; and by multiplying the average cost of repairs per locomotive mile by the number of locomotive miles in any state.

Q. Are your locomotives assigned to a particular division and do they remain on those divisions? A. To some extent only. The locomotives in South Dakota do not remain there always. A locomotive may be sent from South Dakota to the shops and another one returned in its place.

Q. Have you got an inventory or record of your locomotive showing the individual numbers of those locomotives and their manufacture and date of purchase by your company? A. We have such a record with the exception of certain locomotives that were acquired with the railroads that were purchased by the company; of these we have not such a record.

Q. Have you no record at all of the locomotives included in your exception? A. We have a record of the numbers of the locomotives and of the name of the manufacturer.

Q. And the date of its purchase by you at least? A. I do not believe we have a record of the date of its purchase by such other company or of the cost.

Q. Have you a similar record or inventory of the cars owned by your system? A. We have of certain cars but by no means any considerable number of them; cars have been accumulated from time to time in connection with the purchase of other railroads and in various ways. I do not believe we have anything like a complete record.

Q. How, then, do you keep track of your cars that are sent over other systems of road? A. We have a complete record of the numbers of all of our cars and we keep track of them by those numbers.

Q. And does the record show the name of the manufacturer of those cars? A. Not all of them.

Q. What are the exceptions? A. There are so many exceptions that I cannot tell you all.

Q. Have you an invoice of those cars, that is, of the cars owned by your system? A. Do you mean a record of all the cars owned by the Chicago, Milwaukee and St. Paul Railway Company?

Q. I use the term invoice in this case because it occurred to me you might use that term? A. No, we have a record of all the cars owned by the Chicago, Milwaukee and St. Paul Railway Company by numbers and by names. Some of the cars are designated by names, such as sleeping cars, for instance.

Q. And your record would show the date when your company acquired each of these cars, whether by purchase from the original manufacturer or acquired in connection with the purchase of some other line of road? A. I have never seen such a record, and I do not know whether it would show that or not.

Q. Calling your attention now, again to this statement

which you have furnished us, I ask you if the amounts contained in this statement from items " 11 " to "21," inclusive are the actual or estimated amounts? A. I will answer that question by taking each item separately.

Q. I ask the question in a general form to save time; you stated this morning they were all actual and I want to get at that. A. Item No. 11 is actual with the exception of proportion of wages of local and general agents and local freight and passenger solicitors. The wages of the general agents and local freight and passenger solicitors is apportioned upon an earnings basis as reported by the auditor.

Q. How about item 12? A. It is the actual amount expended in South Dakota for the year ending June 30, 1897.

Q How about item 13? A. It is the actual amount expended for wages during the year ending June 30, 1897.

Q. How about item No. 14? A. Item No. 14, this is actual so far as the supplies for trains and stations are concerned, and so far as the general office supplies are concerned they are divided upon the earnings basis as reported by the auditor.

Q. Have you added any freight to the train and station supplies included in that item? A. Yes, sir.

Q. Is item No. 15 actual or estimated? A. Actual.

Q. Is item No. 16 actual or estimated? A. It is actual.

Q. Item No. 17? A. Actual.

Q. You have stated in connection with an item this morning that there were a number of suits now pending? A. There are.

Q. If those suits were determined adversely to your company when the judgments were paid they would be charged up to that year in which they were paid? A. They would.

Q. So they have nothing to do with this account? A. Nothing whatever.

Q. Item No. 18, is that actual or estimated? A. Actual.

Q. And the suits now pending for such damages to which you have referred have nothing to do with this account? A. Nothing whatever.

Q. How about item No. 19? A. It is actual.

Q. And item No. 20 and No. 21, you have stated were actual; do you know whether the taxes are actual? A. The taxes are actual; the insurance is actual.

Q. Mr. Earling, the wages paid by your company and included in the different items of this statement are they at all affected by the fact that the South Dakota lines are operated as a part of your great system, that is, are they higher or lower by reason of that fact? A. What class of wages do you refer to?

Q. All of them? A. They are the same as would be paid in any case.

Q. If the South Dakota lines constituted an independent system, and were operated as such, they would not have to pay any more for wages? A. Yes; it would pay more for administration.

Q. It would for administration? A. Yes; I have here $51,000 for administration, which includes management and general offices, foreign agencies and advertising, legal expenses and New York office expenses. This is computed on earnings basis. If computed on a mileage basis it would amount to $176,074.34.

Q. Is that the only exception? A. It would require a president and secretary; it would require a general manager, a general freight and passenger agent, a chief engineer, a

general counsel, accounting department and would amount to a great deal more than $51,918.41.

Q. Is that the only exception? A. If these lines were put upon a mileage basis it would amount to $176,074.34.

Q. On what basis did you put that? A. On a basis of earnings of South Dakota as reported and as compared to the total earnings of the system.

Q. When you speak of the earnings of South Dakota you mean as reported upon a mileage basis? A. Yes, sir; on a mileage basis.

Q. It is a fact, is it not, that the material and supplies which enter into this statement which you have furnished us which you call "Exhibit 22" constitutes a very small percentage of the aggregate amount of the cost of maintaining and operating the lines as given by that statement? A. It represents the actual amount of material that is required one year with another or an average on the lines in South Dakota.

Q. You don't understand my question; I say the amount of material and supplies which enter into this statement constitute a very small percentage of the gross amount? A. Expended on the system?

Q. Yes; according to this statement? A. Of the gross amount expended on the system?

Q. In South Dakota, according to this statement? A. Of what gross amount?

Q. Of the gross amount of cost of maintenance and repairs as shown by this statement? A. The materials and supplies shown by that statement are for South Dakota; for the lines in South Dakota and not for the system. If you will make your question plain I will try to answer.

Q. I ask you again if the materials and supplies which enter into this statement, "Exhibit No. 22," do not constitute a very small percentage of the gross amount of the cost of maintaining and operating your South Dakota lines as shown by that statement; that is, a very small percentage in round numbers of $1,500,000? A. Do you wish to know how much of it is labor?

Q. No; I ask you if the material and supplies do not constitute a very small percentage of the gross amount named in that statement, $1,520,309.92? A. I shall have to figure the proportion the material and supplies bear to the total sum of $1,520,309.92; it is easily ascertained.

Q. You can do that later on. You have furnished us a statement here, this "Exhibit 22," which purports to show the cost of maintaining and operating your lines in South Dakota, and you place the cost in that statement at $1,520,-309.92; Mr. Winne in his testimony as well as in your report to the commissioners of South Dakota for the year ending June 30, 1897, gives the cost of such maintenance and repairs at $1,012,912.04, and at the hearing before the Railroad Commissioners at Sioux Falls, Mr. Bird in his testimony as I understand it, placed the cost of such maintenance, repairs and operation at $1,111,394.72, so that we have from yourself and your associate officials three different estimates or statements as to the cost of maintenance and operation of your lines in South Dakota; now, which are we to accept, as correct? A. The statement of the general auditor is based upon a mileage basis Mine is arrived at upon the actual basis of what it costs to operate and maintain the lines in South Dakota. In Mr. Winne's statement the lines in South Dakota re ceived the benefit and advantage of being operated in connection with the system and

on a system average which is lower than the actual cost would be; therefore the difference.

Q. But you claim, do you not, that your statement also shows a benefit that your South Dakota lines derives from being operated as a part of your system? A. To a lesser extent, however.

Q. You stated this morning that the traffic conducted over your lines in South Dakota was of what you would call local trains, did you not? A. I did with some exceptions which I spoke of at the time.

Q. And you also stated that the expenses of operating those local trains are larger relatively than the expense of operating a through train? A. Yes, sir; it is very much larger.

Q. You placed it at from two to three times as much and you say some railroad experts placed it from four to six times as much? A. Yes, sir; I made that statement.

Q. The item of time is quite an element of cost in conducting a local train, is it not, as compared with the cost of operating a through train? A. No, that is a very small item.

Q. What is the difference between the average time made by local trains and through trains? A. A through train will ordinarily make a run of 100 miles in about seven hours, while it takes a local train about ten hours to make the same run.

Q. And the wages of the crew that man the local train for those extra three hours enter as an item into the cost of transportation, does it not? A. No, it does not.

Q. It does not? A. No, the enginemen and trainmen are paid by the mile, but if they consume more than ten

hours and thirty minutes in making 100 miles, then they receive overtime for all the time consumed over and above the ten hours and thirty minutes; then, furthermore, the wages of the trainmen, conductors and brakemen, on local trains are a little higher than the wages of trainmen employed on other trains.

Q. And it requires more men on local trains relatively, does it not than on other trains, more brakemen, for instance? A. Not in South Dakota. It does on some lines where the traffic is very heavy.

Q. How many brakemen are usually employed on the freight trains? A. Two brakemen.

Q. How many cars do you handle on an average on through freight trains? A. On an average on the system, do you mean?

Q. Yes? A. I should say from twenty-five to thirty.

Q. How many brakemen on local freight trains? A. There are only a few divisions on the Chicago, Milwaukee and St. Paul road on which we employ more than two brakemen on local freight trains.

Q. Which produces the greatest wear and tear upon the rolling stock, the mere effect of running over the track, or stopping and starting trains? A. The stopping and starting of trains and the switching.

Q. So that is the item which makes local traffic more costly than other traffic, is it not? A. That is a small item, the principal item which makes it more expensive is the fact that the local trains are not loaded to the capacity of the locomotive; they do not haul full trains. That is what increases the cost in proportion to the earnings.

Q. And that cost is also increased by the expense of cor-

lecting the business and loading the freight on the receiving line and the cost of unloading it on the distributing line, is it not? A. All freight has to be loaded or unloaded whether it is in through trains or in local trains.

Q. What is the chief item of cost in the transportation of freight? A. The item what is known as " conducting transportation," which consists of the wages of conductors, baggagemen, brakemen, engineers, firemen and wipers, fuel, oil, and waste, train and station supplies, station service, personal injuries, damage to property, loss and damage to freight, stock yards expenses, expenses of elevators, mileage of cars, sleeping car and parlor car expenses, trackage and switching charges, repairs of locomotives, repairs of cars, tools and machinery; all those items enter into the conducting of transportation.

Q. I ask you if the cost of collecting and distributing freight is not relatively heavier than the cost of transporting freight in through trains? A. It costs more for local freight train service than it does for through freight train service in proportion to the earnings received.

Q. Mr. Earling, have you made experiment or do you know of any having been made to ascertain the value or importance of any having been made

importance of distance as a factor in the cost of transportation, that is, after the freight has been loaded? A. The distance affects the cost to some extent.

Q. But it is a very slight one? A. If, for instance, you have a through train with enough freight in it to load the engine to its capacity and you run that train over a certain division, we will assume the division is 200 miles in length, it costs no more to run it the first 200 miles than it will to run it the second 200 miles or the third 200 miles or the fourth

200 miles, so the question of distance affects it only to a certain extent.

Q. Then it is a very slight factor in the cost of transportation as compared to the expense of collecting or picking up freight and distributing it? A. I did not say that.

Q. (Last question read by stenographer.) I ask you that question. A. I do not understand that question.

Q. Now, Mr. Earling, in view of the fact that your traffic in South Dakota is largely local traffic, as you stated this morning, costing from two to three times as much as it does to run through trains, do you consider a division of earnings on a mileage basis fair to South Dakota? A. Yes, sir; I do not know of a fairer basis.

Q. Do you know of any independent line or system of road which performs the same service that the South Dakota lines perform for your system, that divide on that basis with the receiving roads? A. I am not familiar with the division of rates nor with other details of the traffic affairs of the company.

Q. Then why did you state this morning or this afternoon that the South Dakota lines had no cause to complain of their treatment at the hands of the Milwaukee system? A. So far as the maintenance and operation is concerned they have no cause for complaint.

Q. Then you wish to restrict your statement in that way, do you? A. Yes; that is what I stated this morning.

Q. If in your testimony you have stated that South Dakota has no ground for complaint at the way her lines are treated by the Chicago, Milwaukee and St. Paul Railway system, you intend to refer only to the cost of maintaining and operating the lines? A. I referred only to the maintenance and operation.

Whereupon the further hearing was adjourned to Tuesday, January 25th, A. D. 1898, to be continued at the same place at the hour of 10 o'clock a. m. of said day.

January 25, 1898, 10 o'clock a. m.

Cross-Examination of Albert J. Earling continued by Mr. Temple.

Q. Mr. Earling, have you the items which make up your estimate of costs of maintenance and operation as set forth in Exhibit 22, all the items? A. Yes, sir; I have.

Q. Will you furnish the stenographer with a copy of those items? A. I have not the details at hand just now.

Q. I will ask you to furnish the stenographer with those details. Are they in shape now to furnish the stenographer. A. No, sir; they are simply in the form of memoranda at the present time, and are given largely from personal knowledge.

Q. I will ask you to furnish the stenographer with a copy of those estimates in detail, from which you make up Exhibit 22. You stated, Mr. Earling, that the expense account of your system for 1897, as shown in the printed report made to your stockholders, for the year ending June 30, 1897, was not an average account, did you not? A. I stated that during the year 1897, ending June 30th, that some work had been postponed, some repairs had been postponed because the earnings for the year were not as good as they should have been.

Q. I am asking you now for the general average, of the expense account of your system, for the year ending June 30, 1897, as set forth in the printed report to your stockholders. The amount reported as expense account as compared with other years. A. I think it is rather below the average; I

have not the figures at hand but I should judge it was rather below the average in some respects; in others, it would be about the same.

Q. Is it below the average so far as South Dakota's proportion of those expenses is concerned? A. I think it is about a fair average, so far as South Dakota is concerned.

Q. Let me state the queston, please. As compared with Exhibit 22, is the expense account of the entire system for the year ending June 30th, as shown in the printed report to the stockholders an average expense account per annum? A. Exhibit 22 shows what the average expenses would be on the South Dakota lines.

Q. I insist that you answer the question, yes or no? A. It cannot be answered in that way. The report to the stockholders does not show the expenses for South Dakota separately. My statement, Exhibit 22, shows what they are, separately, in South Dakota.

Q. Now, we have had that explanation a dozen times. I insist on an anwser to my question, which calls for yes or no? A. No answer.

Q. Mr. Earling, I presume the sworn reports which your auditor makes to the state commissioners in relation to the condition of South Dakota are correct? A. They do not represent the actual expenses in South Dakota. They are represented in the auditor's report upon the train mileage basis, which is much below the actual expenses. The auditor's report to which you refer, as being made to the State of South Dakota, are made according to the orders of the commissioners upon a basis which has been furnished by the commission, and this basis is the train mileage basis.

Q. I am not asking about the expenses for South Dakota

lines. The reports which your auditor has made to the railway commissioners of South Dakota for a number of year past, show the operating expenses and cost of maintenance of the entire system for each of those years, and, presumably, they are correct? A. They are correct on the basis on which they are made, which is the train mileage basis.

Q. I am asking about the expenses for the entire system? A. Those are the actual expenses for the entire system.

Q. Mr. Earling, I hand you the reports made by your system to the railroad comissioners of South Dakota, for the years 1889, 1890, 1891, 1895, 1896 and 1897. Please take the report for 1889 and tell us what was the actual annual expenses for operation and maintenance of the entire system for that year. You will find it on page 31, I think, Mr. Earling? A. According to the report of 1889, the total operating expenses and taxes for the system were $16,476,515.16.

Q. You do not question the accuracy of that report, do you? A. I do not.

Q. What were the gross expenses of operation and maintenance of the entire system for the year 1890? A. According to the report for the year 1890 the total expenses were $16,410,829.33, not including taxes. In the report of 1890 it does not state whether the taxes are included.

Q. What are the taxes, as shown by that report? A. The taxes for the year 1890 were $830,046.55.

Q. And what were the gross expenses for operation and maintenance for the entire system during the year 1891? A. $17,634,163.23,not including taxes.

Q. What were the taxes in that year? A. $857,906.53.

Q. What were the actual expenses of operation and main-

tenance of the entire system for the year 1893? A. The report of 1893 shows that the operating expenses and taxes were $22,716,651.98.

Q. And for the year 1894 what was the item for expenses for the year 1894? A. For the year 1894, including the taxes, they were $20,302,005.45.

Q. For the year 1895? A. For the year 1895 they were $16,123,098.40, excluding taxes.

Q. And what were the taxes? A. The taxes in that year were $1,084,700.45.

Q. The same item of expenses for the year 1896 and 1897? A. For the year 1896, $18,800,051.84, excluding taxes. Taxes in that year were $1,082,083.74.

Q. For the year 1897? A. For the year 1897, $17,393,308.22 not including taxes. The taxes for that year were $1,184,230.86.

Q. Mr. Earling, if the total expenses of your entire system for repairs to roadways or tracks, repairing of roadway, we will say for the years 1889, 1890, 1891, 1895, 1896 and 1897, as shown by your report to the railroad commissioners of South Dakota aggregate a sum of $8,370,364, or an average of $1,395,060 per annum, then, according to your estimate in Exhibit 22, the average expenses for repairs to track or roadway on the South Dakota lines per annum would amount to one-sixth of the total for the entire system. Would you say that was a fair estimate for South Dakota? A. What items of expense does that include?

Q. Repairs to roadway, as shown by your report? A. You mean the labor and material?

Q. I take the expression from the sworn statement of your auditor made to the railroad commissioners of the State

of South Dakota? A. I will have to see what items of expenses are included in the amount you named before I can answer the question.

Q. If you prefer, I will use the word "track." I will ask you if, in your judgment, it would cost one-sixth as much per annum for repair of tracks on your South Dakota lines as the total cost for the entire system? A. Repairs of track include a number of items. If you will say renewal of rails or renewal of ties, I can answer your question intelligently.

Q. Have you included the item, renewal of rails, under the head of repairs of tracks, in Exhibit 22? A. No, sir; I have not.

Q. What do you understand to be the difference between the term "repairs of tracks" and "repairs of roadway?" A. We do not use the term "repairs to roadway." Our accounts are not kept in that way. There are certain items of expense charged to repairs of track and certain other items charged to renewal of rails, and so on.

Q. I will ask the question in this form. If in your judgment, based upon your experience, the actual cost for annual repairs to tracks in South Dakota would amount to one-sixth of the entire expense to the whole system for that item? A. No, sir; it would not amount to one-sixth, because the traffic is lighter in South Dakota and the wear and tear is not so great. In the matter of ties, repairs to buildings and many other items, there would be no difference. It would be the same on the South Dakota line as it is on any of the other lines, but not as to rails. The expenses would be somewhat less in South Dakota than in some of the other states where the volume of traffic is larger.

Q. Now, Mr. Earling, according to these reports which you

have made to the railroad commission of South Dakota, the aggregate expenses for renewal of rails for the years 1889, 1890, 1891, 1895, 1896, 1897, amount to the sum of $2,680,267.67, or an average annual expense of $446,701 for the entire system. Then, according to your estimate, as shown in Exhibit 22, the renewal of rails for your lines in South Dakota would cost one-third as much annually as for the entire system? A. I do not believe you can arrive at a fair average and omit the expenses for three or four years between 1889 and 1897. In order to arrive at a fair average it is necessary to include those years.

Q. Well, then, if we take the expenses for 1897, as an average year, your estimate would charge South Dakota with one-fourth of the entire item of expense designated as renewal of rails upon the system. Is that fair? A. The actual number of miles of rails laid during the year 1897 in South Dakota would not be a fair average because it is far above my estimate—there was relaid during 1897 in South Dakota over 125 miles of rails, while my estimate is based on an average annual renewal of sixty-eight and eighty-eight one-hundredths miles.

Q. On an average would it cost one-third as much for renewal of rails in South Dakota as your entire system? A. No, sir.

Q. Would it cost one-sixth as much? A. No, sir; not quite, if taken for a series of years, say fifteen or twenty, but it would exceed it some years as it did in 1897. Therefore, you must find an average for a long series of years, in taking into consideration the life of rails. In some cases they last much longer than in others, according to the volume of traffic.

Q. Mr. Earling, if only 500 miles of your lines in South

Dakota are fenced, and all the lines outside of that state are fenced, ought it to cost one-fourth as much for repairs to fences in South Dakota as on the entire system? A. All the lines outside of the State of South Dakota are not fenced.

Q. I understood you to say so yesterday? A. I did not say so.

Q. I understood you to so state it? A. I did not so state it.

Q. What portion of your lines, relative to South Dakota are fenced? A. There are 800 miles of the road outside of the State of South Dakota which are not fenced.

Q. How many miles of road outside of the state? A. Has the company?

Q. Yes, sir? A. 5,052.77 miles.

Q. That is outside of the State of South Dakota? A. Yes, sir.

Q. And all of those lines are fenced, except 800 miles? A. Except about 800 miles.

Q. That would give you then, in round numbers, over 4,200 miles of fence, outside of the State of South Dakota, and about 500 miles of fence in the State of South Dakota? A. Yes, sir.

Q. Does it cost more relatively for repairs of fences on your South Dakota lines than outside of that state? A. No, sir; it does not, taking an average of a series of years, the expense would be about the same, except as to the material. That costs more in South Dakota than it does on other lines, because it is further removed from the base of supplies.

Q. Then why, Mr. Earling, in your estimate contained in Exhibit 22, do you charge the South Dakota lines with one-

fourth of the cost for repairs of fences upon the entire system, when only one-eighth of your fences are in South Dakota? A. In my statement, Exhibit 22, I have charged to repairs of fences in South Dakota, just what it will cost one year with another for a series of years. That is based upon actual experience in connection with the repairs of fences on the system. The materials in South Dakota for repairs of fences cost more than they do, for instance, in Wisconsin.

Q. Do you know how much? Do you know the difference in the price of lumber in South Dakota and Wisconsin, such as you use for the repair of your fences? A. The cost is increased by the actual cost of the transportation of the lumber from Wisconsin to South Dakota.

Q. If there are 4,752 miles of fence on the entire system and only 500 miles in South Dakota, what proportion of the cost of repairs of expenses for the entire system, would that item of expense for your South Dakota lines amount to per annum? A. The same which the number of miles in South Dakota would bear to the total number of miles plus the additional cost of material in South Dakota over and above its costs on other lines.

Q. You could not tell what the difference in cost would be? A. I cannot give the figures exactly just now.

Q. And it would cost more per annum for repairs of your buildings on your South Dakota lines than the cost of those buildings bears to the cost of the buildings of your entire system? A. Yes, sir; it would, because many of the buildings on the lines outside of South Dakota are of a more permanent character. They are constructed of brick and stone, while in South Dakota nearly all of them are wooden buildings. They require more repairs than the buildings constructed of brick and stone.

Q. The report to your stockholders for the year ending June 30, 1897, shows that you expended for repairs of buildings in that year $305,572.79. Was that an average year, so far as repairs to buildings are concerned? A. It is not an average year; it is below the average.

Q. Below what years, Mr. Earling? Was it below the year 1896? A. I cannot carry these figures in my mind.

Q. Was it below the year 1895? A. I will examine the records and give you the information as soon as I can make the examination.

Q. How are you able then to state, Mr. Earling, it is below the other years? A. Because I know that many repairs for the year 1897 were postponed because of the reduced earnings during that year.

Q. According to this printed report to your stockholders for 1897, there was expended for repairs of buildings $301,411.35, so that 1897 was not below that year? A. The expenditures on buildings vary largely from one year to another. Some years they are a great deal more, and other years a great deal less; it depends largely upon conditions.

Q. Now, will you turn to your report to the State of South Dakota, for the year 1895, and tell me what the repairs of buildings for your entire system amounted to in that year? A. $205,154.58.

Q. That is less than 1893? A. It is less, and there is a very good reason for it. It is a well known fact that the year 1895 was about as bad a year as the railroads ever had, and they limited their expenses just as much as they could.

Q. Which has been your best year since 1889? A. I have not the figures at hand.

Q. Would 1893 be a representative year? That is the

year of the World's Fair, I believe? A. The only way to arrive at an average is to take a series of years comprising ten to fifteen years, in order to arrive at a correct average.

Q. If we should begin with the year 1889 and come down to 1897, could you get an average? Would an average, based upon the expenditures of those years, be a fair one? A. No, sir; because many of the company's lines were constructed from the years 1880 to 1890, and the buildings and structures in connection with new lines would not require extensive repairs for the first five, six or eight years, but after that they would probably require more extensive repairs. Therefore, it is necessary to cover at least fifteen years, and perhaps more, in order to arrive at the correct average of the cost of maintaining and repairing the buildings on this company's lines.

Q. It would be impossible at this time then to get at a fair average for your system in South Dakota, would it not? A. We can strike an average from the experience we have had for thirty years, and the average which I have given, as shown in Exhibit No. 22, covers the experience for a period of twenty to thirty years.

Q. Now, you began to build in South Dakota in what year? A. 1878 or 1879.

Q. And you say on those new lines repairs would not begin to be necessary for some five or six years? A. Some might be needed in six years, others in ten years, and some in fifteen years. It is difficult to say how soon after the construction of a building the repairs would become necessary.

Q. You say beginning with the time when these repairs would become necessary, you would need to cover a period

of fifteen years to get a fair average? A. It would need to cover a longer period than fifteen years.

Q. Then how do you reach an average for your estimate as contained in Exhibit 22, when fifteen years have not elapsed since repairs became necessary? A. My average was obtained by the cost of repairing and maintaining the building of this company for a period of twenty-five or thirty years, and that shows that it requires an average expenditure of not less than five per cent. per annum of the value of the buildings, to keep them in proper condition.

Q. You stated just now the amount expended in 1897 for repairs of buildings was less than previous years. Will you turn to the report to the State of South Dakota for the year ending 1894, and tell me what amount was expended in that year on the entire system for repairs of buildings? A. $249,986.45.

Q. That is less than the amount of such repairs in 1897? A. It would necessarily be, because the year 1894 was one of the years of the panic, and railroads, like everybody else, postponed their expenditures as much as possible, because of the reduced earnings.

Q. Well, 1893 was the World's Fair year. Did you postpone repairs to buildings that year? A. In the latter part of 1893 we did to a very considerable extent.

Q. Why? A. Because the panic struck this country in the spring of 1893, and many improvements and repairs that were in contemplation were cut off in the early spring of 1893, the work was postponed.

Q. Did you postpone these repairs for the year 1892 in anticipation of the panic of 1893, or for any other reason? A. The repairs of buildings were not postponed in 1892, but they were very much less than they would be, and will be

in later years, because so many of the company's lines were constructed between the years 1879 and 1886, so that the repairs to buildings did not fall due as early as 1892 therefore, the expense in 1892, whatever it may have been, would not be as large as it will be in 1898, 1899, 1900, and so on. 1892 would not be a fair average, no matter what it may have been, because the buildings and structures on those new lines did not require the repairs which they will require later.

Q. So, if your position is true, you would have to anticipate the future several years to get an average? A. I do that by stating that it requires an expenditure of five per cent. per annum on the value of the buildings, in order to maintain them and keep them in proper repair, and that is based on the experience for a large number of years.

Q. The reason which you gave just now for the fact that the amount expended for repairs to buildings in 1893 was so small, was that those repairs were postponed because of the panic of that year? A. Many were postponed on that account as a great many other expenditures were postponed on account of the panic.

Q. Are not these accounts embodied in your report made up for the fiscal year ending June 30th? A. Yes, sir; since 1888.

Q. So that the account for 1893 ended with June 30th of that year? A. Yes, sir.

Q. Now, the panic of that year did not break until June, did it? A. The panic in that year became apparent to us before the 1st of April. I remember very distinctly of writing the president of the company, who was in New York, and asked him in view of the financial conditions whether he desired to go ahead with the improvements and repairs

that were authorized and were in contemplation. I received his reply by telegraph to postpone everything that could be postponed in the way of improvements and repairs. That was about the 1st of April, 1893. The repairs of buildings and a large part of the work which is done in connection with buildings, is not done in the winter months. It is done beginning about the 1st of April and extending through the spring, summer and fall months. Therefore, if those improvements and repairs which were in contemplation for the year 1893 had proceeded, then we should have spent quite a large sum during the months of April, May and June, 1893, but, as I have stated, the work was postponed.

Q. Now, will you turn to your report to the railroad commissioners of South Dakota, for the year 1893, and tell me what amount was expended on your entire system for repairs to buildings that year? A. $267,240.23.

Q. That was less than the year 1897? A. It was.

Q. Now, give us the amount of these repairs for the entire system, as shown by your report, for the year 1892? A. $266,574.95.

Q. Still less than the year 1897? A. Still less because, as I have explained, the repairs to many of the buildings on the new lines had not become necessary at that time. They were not in need of general repairs as they will be later on, as they get older.

Q. Then, as we go back to the year 1892, the repairs of buildings on your system got less? A. That depends on circumstances. Sometimes there may be extensive improvements and additions made to buildings, and more extensive repairs made in one year than another, and one year would not represent an average.

Q. Would additions and improvements to buildings come under the head of repairs? A. Some of the improvements would probably come under the head of repairs. Additions would not, but some improvements might.

Q. What amount was expended for repairs of buildings on your system for the year 1891, referring to the state report of that year? A. $212,669.81.

Q. And for the year 1890? A. $157,947.58.

Q. And for the year 1889? A. $170,233.16.

Q. And 1888, if you have it there? A. I have not got it.

Q. Mr. Earling, coming back now to the renewal of ties. How far apart do you lay your ties on your lines of road? A. That depends on the width of the ties.

Q. I mean the distance between the middle of the ties. A. That also depends on the size of the tie. If the tie was twelve inches wide they would necessarily be further apart than if they were only six inches wide.

Q. How far apart are the ties laid on your South Dakota lines? A. They average about sixteen or seventeen per rail length.

Q. And a rail length is thirty feet? A. Not in all cases. Thirty feet is the maximum, and runs down to twenty-four feet, sometimes twenty-two feet, but we use about that many ties for a thirty-foot rail.

Q. These ties that you used for replacement of ties on your South Dakota lines in 1897, were they purchased expressly for those lines or purchased with the general supplies for the entire system? A. They were purchased in connection with the purchase of all the ties for the system.

Q. At what did you figue the cost per tie for your South Dakota lines? A. I figured the cost of the tie, in South

Dakota at 58 cents apiece, for a No. 1 cedar tie. That represents the cost of the purchase, in South Dakota.

Q. And were all the ties used on your South Dakota lines in 1897 No. 1 cedar ties? A. They were equal to No. 1 cedar ties. Where they are not No. 1 ties, it costs more to maintain the tracks, so it is the equivalent. It amounts to the same thing.

Q. And do the ties cost more for the South Dakota line than the remaining portion of your system? A. The ties cost more in South Dakota than they do in Wisconsin, because they are further removed from the timber land.

Q. Well, take the average on your system? A. They would cost more in South Dakota, because the lines in South Dakota are further removed from the point where these ties are obtained, than the average of the system is.

Q. What would make that additional cost? A. Transportation.

Q. If the cost of the ties used upon your entire system, for the year 1897, as shown in the report to your stockholders for that year, averages 44 cents apiece, ought the ties sent to your South Dakota lines to cost that additional sum of thirteen cents per tie for transportation? A. They should cost fully that much more, because in the reports to which you refer, no charge is made for the cost of transporting those ties.

Q. Do you mean to say that the average life of a new steel rail is only sixteen years? A. Taking the South Dakota lines as a whole, the average life of a new steel rail is not more than sixteen years.

Q. And your estimate is based entirely upon your experience with your South Dakota lines? A. Upon South

Dakota lines and upon other similar lines having a similar traffic.

Q. Do you say from your experience generally, as a railroad man, that the average life of a new steel rail is sixteen years? A. In many places it is not more than seven years; in others it is ten years. It depends entirely upon the volume of traffic and the wear and tear, and upon the number of trains passing over it. In South Dakota the average life of a new sixty-pound steel rail will not be more than sixteen years. It would be rather less.

Q. But the traffic is relatively lighter on your South Dakota lines? A. Yes, sir.

Q. So if your traffic were heavier, it would not last sixteen years? A. No, sir; we have many lines where the rails are replaced within seven years. I have known them to be replaced within four years.

Q. At what have you estimated the value of these second-hand steel rails that you used for renewal on the South Dakota lines in 1897? A. I have valued them at $24.50 per ton during the year. The rails that were purchased for renewal, for the year 1897, cost the company $29 per ton in Chicago. These rails which you call second-hand, some of which were used in South Dakota, were selected from rails which had been taken up from lines outside of the State of South Dakota. Only such of them as were perfect in every respect were selected for that purpose, and they were charged out under my statement at $24.50 per ton, in South Dakota. New rails that were purchased for that year's replacement would have cost in South Dakota $33.50 per ton, therefore, I have made an allowance of $9 per ton for the use that these rails had given in some other place, and that was a very low price for those rails.

Q. Have you not just stated that your railroad system bought its supply of rails in 1897 at $29 per ton? Bought its rails, for the renewals which were required in 1897, for $29 a ton? Then why do you figure the original cost of second-hand rails at $33 a ton? A. I did not.

Q. These second-hand rails, used in your South Dakota lines in 1897, had been in use for several years you stated, some of them seven or eight years? A. More or less, but they were perfect rails, and only perfect ones were selected from the rails that were taken up, for relaying purposes in South Dakota.

Q. Then, if the average life of a steel rail is sixteen years, you would consider a steel rail that had been in use eight years would be worth half price. A. Such of them as are still perfect are worth more than half price. Those which are bruised and in bad order would not be worth half price. In addition to that, I have made a proper allowance for salvage for the old rails, as they are taken up in South Dakota.

Q. Have you made the computation showing what amount of the total sum of $1,520,000, which you estimate would be the total cost of maintaining and operating your lines in South Dakota, is represented by the value of material and supplies? A. It is not yet completed. I will try to have it this afternoon.

2 p. m. January 25, A. D. 1898.

A. J. EARLING, cross-examination continued by Mr. Temple.

Q. Have you brought with you a statement of the details upon which you based your general estimates as stated in Exhibit 22? A. Yes, sir; I produce a detailed statement, from which the statement called Exhibit 22 is made up.

Whereupon the paper was marked by the special examiner "Exhibit 23" for identification.

Cross-Examination by Mr. Null.

Q. Mr. Earling, at what rate, per ton do you calculate the freight on steel rails from here to Mitchell? A. About six-tenths of a cent, per ton per mile.

Q. Can you state about what it amounts to? A. It amounts to about $4.50 from Chicago.

Q. Where were these rails taken up? A. On various parts of the line, then shipped to Savanna, Illinois, where they were redrilled for the standard angle-bars, now in use by the company on all of its lines.

Q. These rails were taken up on what are called your eastern divisions? A. Yes, sir; largely so.

Q. About what freight do you calculate on ties? A. The freight on the ties is at about the same rate, six-tenths of a cent per ton per mile.

Q. About what would it amount to per 100 ties? A. I cannot answer that question, because they come from various parts of the country; some of these ties come from Michigan across the lake to Chicago and to Milwaukee and are then transported by rail to destination; others come from the northern part of Wisconsin and others again come from the northern peninusla of Michigan.

Q. In the estimates which you have made, about how much have you calculated for freight on ties? A. About six-tenths of a cent, per ton per mile.

Q. Can you state about what that amounts to per tie, or per 100 ties? A. In round numbers I should say about 22 cents per tie, according to the point from which they are shipped.

Q. I asked you about what you calculated in making your estimate, about what allowance you have made for freight? A. I have taken the average of the distance from Chicago and Milwaukee and from Northern Wisconsin points and from Michigan, to South Dakota.

Q. What is that? A. That I should say is about 20 to 22 cents per tie. The number of ties in a car will average about 210.

Q. About how many to the mile have you estimated in your figures there? A. 3,000 per mile.

Q. Have these rails that have been taken up and been used again, which would be denominated here as old rails or second-hand rails, have they any known or fixed value? A. Yes, sir; they have. Some of the rails which we have used in South Dakota are called relayers. When new rails sell at $29, these relayers would sell for about $20 or $22 per ton. In making the price of the rails for South Dakota $24.50 that includes new rails as well as the relayers. I have taken the average cost of $24.50, for the new rails as well as for the relayers.

Q. Then you don't wish to be understood as charging in your estimates here, charging South Dakota $24.50 per ton for what you denominate as relayers? A. $24.50 refers to the average cost of new and old, which is, I may add, a very low price. I wish to explain further, by relayers, I mean such rails as are taken from other lines where a heavier section is required. Only the perfect rails are selected for relaying purposes. They are not taken up from such heavier traffic lines because they are worn out, but because the section is too light and these heavier traffic lines require heavier sections. These lighter sections are then taken up, the perfect rails are selected from the light

sections and are transferred to other lighter lines for relaying purposes.

Q. It is a fact, is it not, Mr. Earling, that the heavier rail is required by reason of the development of the heavier equipment of recent years as well as heavier traffic? A. Yes, sir; our standard now for the heavy traffic lines is eighty-five pounds to the yard. Ordinarily, the lighter sections of rails cost more than the heavy sections, because of the additional manipulation that is required to reduce them to such lighter section. In buying large quantities however, as is the case with the Chicago, Milwaukee and St. Paul Company, of heavy sections, the rail mills make to us the same price on the lighter sections that they do on the heavier sections, but if the road were to buy only the light sections, the price would necessarily be higher.

Re-direct Examination by Mr. Peck.

Q. Mr. Earling, this paper which I now hand to you is the paper showing the details of Exhibit 22, is it not? A. Yes, sir.

Mr. Peck: I offer it in evidence.

Exhibit 23 here received in evidence.

EXHIBIT 23.

COST OF MAINTENANCE AND OPERATION OF LINES IN SOUTH DAKOTA.

DETAILS OF ITEM NO. 1.—REPAIRS OF TRACK

LABOR.		
7 roadmasters at $1,200 each per annum	$ 8,400 00	
125 track sections—$970 for labor per section, per annum for regular section force	121,250 00	
Usual extra gangs employed repairing and strengthening embankments; surfacing track, setting up and taking down snow fence, etc	46,395 00	
1 crossing watchman, per annum	420 00	$176,465 00
MAINTENANCE—Frogs and Switches.		
690 frogs—renewal 20%, 138 per annum, at $18.00 each, delivered at Mitchell.	2,484 00	
1,380 guard rails, renewal 10%, 138 per annum, at $3.10 each	427 80	
690 sets switch ties and head blocks, renewal 12½%, 86 sets per annum, at $46.43 each	3,992 98	
690 switch stands, rods, locks, chairs, blocking, etc., renewal 5%, 35 sets per annum, at $20.00 each	700 00	
10 railroad crossings; renewal 20%, 2 per annum, at $100.00 each	200 00	
Total	7,805 78	
LESS SALVAGE.		
55,200 lbs. frogs.		
15,200 lbs. guard rails.		
7,000 lbs. switch stands, rods, etc.		
2,400 lbs. railroad crossings.		
79,800 lbs. at $4.50 per ton at Mitchell	179 55	7,626 23

MAINTENANCE of Crossings, Signs, &c.		
1,200 highway crossings—renewal of planking for 200 crossings per annum, 48,000 ft. at $13.00 per M. at Mitchell..	624 00	
1,200 highway crossing signs—renewal of 10%, 120 per annum at $5.00 each.....	600 00	
40 railroad crossing "One Mile" signs, renewal 10%, 4 per annum, at $6.00 each	24 00	
REPAIRS OF TRACK.		
Maintenance of crossings, signs, &c., 40 railroad crossing " Stop" signs—renewal 10%, 4 per annum, at $6 each.....	24 00	
2,000 whistling posts (two for each crossing outside of cities), renewal 10%, 200 per annum, at $1.00 each.....	200 00	
256 station mile boards; renewal 10%, 26 per annum, at $6.00 each.....	156 00	
510 mile posts; renewal 10%, 51 per annum, at $1.00 each.....	51 00	
1,100 sets rail rest posts; renewal 10%, 110 per annum, at $1.00 each.....	110 00	
10 sets timbers for railroad crossings. Renewal 20%, 2 per annum, at $23.20....	46 40	
100 miles snow fence; renewal 12½ miles per annum, at $864.00 per mile.....	10,800 00	12,019 40
TRACK TOOLS.		
152 hand cars, at $35.00 each, $8,220.00; renewal, 8%.....	657 60	
131 push cars at $19.00 each, $2,489.00; renewal, 8%.....	199 12	
Valuation of tools for section gangs and extra gangs, $13,249. Replacements, 12½%.....	1,656 12	2,512 84
TELEGRAPH DEPARTMENT.		
Labor furnished by railway company for repairs of telegraph lines, 3 repairers at $840.00 per annum.....		2,520 00
Total Repairs of Track.....		$201,143 47

DETAILS OF ITEM NO. 2.

RENEWAL OF RAILS.

Renewal of rails 6¼% per year for 1,101 miles; 68.81 miles, 60 lbs. per yard, 6,488 tons at $24.50 per ton	$158,956 00	
Angle bars, 722 tons at $31.50 per ton	22,743 00	
Track bolts, 75 1-10 tons, at $44.50 per ton	3,367 65	
145,200 nut locks at $6.50 per M	943 80	
7,630 lbs. washers	175 00	
344 kegs new spikes, at $4.00	1,376 00	
	$187,561 45	

LESS SALVAGE.

5,633 tons rails.
145 3-10 tons splice bars.
41 7-10 tons bolts.
34 2-10 tons spikes.

5,854 2-10 tons, at $8.00 per ton at Mitchell	46,833 60	$140,727 85
Cost of distributing and laying 68.81 miles of new rails, and of picking up and loading 68.81 miles of old material, at $250.00 per mile		17,203 12
Total Renewal of Rails		$157,930 97

DETAILS OF ITEM NO. 3.

RENEWAL OF TIES.	206,596 00
Number of ties in track, 3,562,000; 10% required for renewal per annum, 356,200 at 58 cents each	

DETAILS OF ITEM NO. 4.

REPAIRS OF BRIDGES.	56,445 27
This is the actual amount expended during the year ending June 30th, 1897	

DETAILS OF ITEM NO. 5.

REPAIRS OF FENCES.

Fence for 505 miles of track, 1,010 miles of fence; renewal 6 2-3% per annum, 68 miles, at $133.20, for material and labor per mile	9,057 60	
1,000 cattle guards, renewal 12½ % per annum; 125 at $18.00 each	2,250 00	11,307 60

DETAILS OF ITEM NO. 6.

REPAIRS OF BUILDINGS.

5% per annum on valuation of $940,606.00, being original cost	47,030 30	
4 pump repairers—wages $900.00 each per annum	3,600 00	50,630 30

DETAILS OF ITEM NO. 7.

REPAIRS OF LOCOMOTIVES. 48,602 23

This amount is arrived at by taking the total cost of repairs of locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. [illegible] total locomotive miles in South Dak[illegible] multiplied by the cost per mile gives the above amount for the year ending June 30th, 1897.

DETAILS OF ITEM NO. 8.

REPAIRS OF CARS.

Freight cars	$35,576 91	
Passenger cars	23,157 90	
Sleeping cars	635 36	$59,370 17

This amount is arrived at on the same basis as repairs of locomotives.

DETAILS OF ITEM NO. 9.

REPAIRS OF TOOLS AND MACHINERY. 2,492 01

This amount is arrived at on the same basis as repairs of locomotives and cars

DETAILS OF ITEM NO. 10.

ADMINISTRATION. 51,918 41

Management and general offices, Foreign agency and advertising. Legal expenses. New York office expenses. Proportion of total expenses, for the year ending June 30th, 1897, on earnings basis.....

ADMINISTRATION.

If computed on mileage basis would be $176,074 34

DETAILS OF ITEM NO. 11.

STATION SERVICE. 98,907 30

Actual wages paid employes on station rolls.
Actual wages paid traveling auditors.
Actual wages paid yard switchmen.
Actual wages paid watchmen.
Proportion of wages of local general agents, and local and freight and passenger solicitors, on earnings basis for the year ending June 30th, 1897.

DETAILS OF ITEM NO. 12.

CONDUCTORS, BAGGAGEMEN AND BRAKEMEN. $95,345 49

Actual amount expended for wages during the year ending June 30, 1897.

DETAILS OF ITEM NO. 13.

ENGINEERS, FIREMEN AND WIPERS. 100,575 95

Actual amount expenses for wages during the year ending June 30, 1897.

DETAILS OF ITEM NO. 14.

TRAIN AND STATION SUPPLIES. 23,711 11

The value of supplies furnished for trains and at stations and proportion general office supplies, during year ending June 30, 1897, on basis of earnings.

DETAILS OF ITEM NO. 15.

FUEL CONSUMED.	229,839 45
The value of fuel consumed by locomotives in South Dakota. during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 16.

OIL AND WASTE.	6,996 88
The value of oil and waste used in locomotives and cars during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 17.

PERSONAL INJURY.	1,343 34
The actual amount paid during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 18.

DAMAGE TO PROPERTY.	1,617 50
The actual amount paid during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 19.

LOSS AND DAMAGE TO FREIGHT AND BAGGAGE.	3,630 34
The actual amount paid during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 20.

TAXES.	98,482 68
The actual amount paid during the year ending June 30, 1897.	

DETAILS OF ITEM NO. 21.

INSURANCE.	8,460 94
This represents the premium which is 47 cents per $100. This property is insured for less than one-third of its actual value.	

DETAILS OF ITEM NO. 22.

MILEAGE OF CARS.	4,100 02
This represents the proportion of the mileage balance against the company on the actual number of miles made by foreign cars in the State of South Dakota.	

DETAILS OF ITEM NO. 23.

SLEEPING CAR EXPENSES.	862 49
This amount represents the wages, supplies and washing, in proportion to the number of miles run by sleeping cars in the State of South Dakota.	

Q. Mr. Earling, how many miles of road had the Chicago, Milwaukee and St. Paul Company in 1876? A. 1,400 miles.

Q. How much in 1877? A. 1,412 miles.

Q. How much in 1878? A. 1,512 miles.

Q. How much in 1879? A. 2,231 miles

Q. How much in 1880? A. 3,775 miles.

Q. And has all of the balance of the system been constructed or acquired since 1880? A. Yes, sir; it has.

Re-cross Examination by Mr. Null.

Q. Mr. Earling, I believe the South Dakota lines were acquired by the close of the year 1883, practically all of the lines you have there—been acquired or constructed? A. No, sir; some were constructed later than 1883; I remember that the lines west of Ipswich were constructed I believe in about 1886. That part of the line extending from Mitchell to Yankton was constructed in 1886: also what is known as the Armour line. Quite a considerable of the mileage in South Dakota was constructed subsequent to 1883.

Q. The line to Chamberlain and the "Jim" river line, the Southern Minnesota and the Hastings and Dakota lines were all completed by the close of the year 1883, were they not?

A. You referred first to the line to Chamberlain?

Q. Yes? A. The memorandum I have here states that that line was completed in 1881.

Q. And the Jim river line? A. Between Mitchell and Aberdeen in 1883, according to this memorandum.

Q. And in 1886 you built the line from Scotland to Mitchell and from Tripp to Armour? A. Yes, in 1886; the line from Roscoe to Eureka in 1887, and from Roscoe to

Orient in 1887, and from Roscoe to Bowdle in 1886, and from Tripp to Armour in 1886, and from Bristol to Madison in 1887.

Mr. Null: I guess that is all.

Whereupon the further hearing was adjourned to Wednesday January 26, A. D. 1898, to be continued at the same place at the hour of 10 o'clock a. m., of said day.

January 26, 1898, 10 o'clock a. m.

WILLIAM H. TRUESDALE, a witness called on behalf of the complainant, having been first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Truesdale, in what business are you engaged at the present time? A. I am in the railway business.

Q. With what company? A. I am second vice president and general manager of the Chicago, Rock Island and Pacific Railway Company.

Q. Describe briefly the location of your road, I do not mean to go into all the details, but generally? A. The lines of the Chicago, Rock Island and Pacific Railway Company are located in territory west of Chicago, running through Illinois, Iowa and Kansas, and the east part of Colorado to Colorado Springs, down west through Southern Kansas and the Oklahoma and Indian Territories, to the Texas State line.

Q. What are your duties briefly as second vice president and general manager? A. I have immediate charge of the traffic and operating department of that line.

Q. How long have you held your present position? A. About three years and a half.

Q. Prior to your appointment as vice president and general manager of the Rock Island Railway Company, what position did you hold and with what company? A. I was connected with the Minneapolis and St. Louis Railway Company, from 1883 until 1894, as assistant to the president, vice president and general manager, and receiver, and general manager.

Q. Where were your headquarters at that time? A. At Minneapolis, Minnesota.

Q. When did you begin railway service? A. In the year 1869.

Q. In what different capacities have you been employed by railway companies? A. I entered the service as a clerk in the auditor's office, later was cashier and paymaster, purchasing agent, transfer agent, representing a line in an office established in Germany. Afterwards, I was purchasing agent for the receiver of the same road, which was the Rock Island & St. Louis Railway, now a part of the Burlington system. After that I went to Indiana and was there five years, as treasurer, paymaster and general freight agent of the Logansport, Crawfordsville & Southwestern Railway. From there I went to Minneapolis, as assistant traffic manager of the Chicago, St. Paul, Minneapolis & Omaha Railway, where I remained until I became connected with the Minneapolis & St. Louis Railway.

Q. During the time you have been connected with the various railways you have mentioned, have you studied and considered the various questions that arise in the operation of railways? A. I have. The various positions I have held and the duties devolving upon me in them, of course, have made it necessary I should. It has been my life work and all the questions pertaining to it I have given careful consideration.

Q. And you have been connected with traffic departments, operating departments, accounting departments and treasury departments? A. And the maintenance—charge of the maintenance, I have.

Q. And now, as second vice president and general manager of the Rock Island Road, you have, subject to the president, charge of all the departments? A. Well, maintenance is not immediately under my charge. I have sort of of an advisory supervision over that, however, but the particular duties in connection with that are assigned to another officer of our company.

Q. Do you know Mr. Albert J. Earling, second vice president and general manager of the Chicago, Milwaukee & St. Paul Railway Company? A. Yes, sir; I have known him for several years.

Q. Did you hear his testimony day before yesterday? A. I heard the most of it.

Q. Did you hear the opinion expressed by Mr. Earling on the witness stand, in relation to local and through traffic; in relation to the operation and maintenance of railways? A. Yes, sir; I think I heard all of that.

Q. Now, Mr. Truesdale, I will ask you to state generally whether, in your judgment, the views expressed by Mr. Earling on those subjects were correct or not?

Mr. Null: Objected to as immaterial and incompetent.

Mr. Temple: It is objected to for the further reason that the witness' attention has not been called to the particular views or opinion of the witness Earling, and that the question is too general and indefinite.

A. I think I can safely say they were eminently so. In fact, as I listened to his evidence—and I did so very care-

fully—it struck me that his views, the figures which he gave as the basis for his several computations, were not only correct but were very correct and accurate and also eminently fair, as applied to the matter under consideration and the traffic of the lines of his company in South Dakota, so far as I am able to judge regarding it.

Q. Are you acquainted, generally speaking, with the Chicago, Milwaukee & St. Paul Railway? A. Yes, sir; in a general way, I am. I have been connected with railroads that lie in the same territory with a great portion of its lines, for the last twelve or fifteen years. While I have not been over all its lines, I feel I am reasonably well posted as to its situation and the general conditions under which it does its business.

Q. You have been and are now connected with railways in competition with the Chicago, Milwaukee & St. Paul Railway, are you not? A. Yes, sir.

Q. I will ask you to state, Mr. Truesdale, whether in your opinion, based upon your knowledge of the Chicago, Milwaukee & St. Paul Railway and of the conduct of its operation, whether it has been capably, economically and judiciously managed?

Mr. Null: Objected to, as incompetent and no proper foundation laid.

A. There is no question whatever in my mind that such is the case, and I think that the opinion obtains generally, among railroad people, that it has been so managed.

Q. I believe that you stated that you heard Mr. Earling's testimony on the relative expenses in comparison with earnings of local traffic and through traffic? A. I did; yes, sir.

Q. In your judgment, what relation do they bear to each

other. State generally in your own way, and give the reasons, or some of them, for the opinion you may express on the subject, the relative expenses of local and through traffic? A. There can be no question but the expenses of doing a local business is much greater than that of handling through business. Just how much it is, is a question. It is hard to say with any degree of accuracy. The opinions of railway people differ on that subject. I should say, that a very conservative estimate of the difference in the expenses of doing a local, what you may term a strictly local business, as compared with through business, is somewhere in the neighborhood of from two to three times as much for the former as the latter. There are many items of expense that enter into the handling of local business that do not, in the through business. The chief difference, I may say, is in the trains and car loads. A through train can be loaded to the full capacity of the engine. It usually is.

Q. At the beginning? A. At the beginning and through for its entire run. The local train on the other hand—it may start with a train full, but that is very rarely the case, and, by the time it gets through its run, have practically nothing on the train, and *vice versa*. It may start with nothing and at the end of its run have a full train. But, as a general rule, the local trains run lighter over their entire run than the through train, and if you get on an average of from one-third to one-half of the engine's capacity in the train, you are doing very well. Of course, in transacting the local business, the expenses of switching and the risks incident thereto are very much greater than on the through trains. The handling of freight and the labor incident to it is much more than in the through business. That is, about the local intermediate stations. The item of only

partly loading your cars, a very large part of your cars, less than carloads in some and cars only partly loaded; they start from the beginning of the run with what is called a local way car. It may be full at the beginning and by the time you get over the run it is only half full, and at the end of the run there may be only 100 pounds in the car, yet you have to haul it as though it was a full loaded car.

Q. What, if any, difference is there between local and through trains, as to the item of wages? A. Well, usually the men handling local freight trains are paid necessarily more than those running through trains; that is, for the same distance run.

Q. Is there any respect whatever in which the expenses of a through train exceed that of the local train, except the item of fuel, and how much is that? How much more fuel does it take? A. It is a very small item.

Q. In a run of 100 miles, say, by a local train, does not the additional time that is consumed by stopping and switching and other detentions, pretty nearly, if not quite, bring its fuel item up to the fuel item of a through train? A. Well, it probably does. I do not believe there is any great difference.

Q. You have stated, I believe, that you have had experience in maintenance? A. Yes, sir; I have had considerable experience in the maintenance of way.

Q. Among the items of maintenance are the replacement of rails and ties, I believe? A. Yes, sir; they are a very large item in the way of maintenance.

Q. Will you state about the average length of service or what is called the "life" of a rail? A. Of course, the life of a rail varies greatly with the service it sustains, and its loca-

tion in the track and the quality of the rail. If the tonnage moving over it is heavy, it lasts but a few years, comparatively. If it is where the traffic is light, of course its life is materially longer. Of course it differs, the life of a rail differs very much whether it is laid on heavy grades and curves. It wears out much quicker where it is so located than where it is laid on straight and comparatively level track. I think the Bessemer steel rails, which are largely used by the railroad companies, the statistics of the road would show, last on an average, taking the light and heavy traffic as it runs, somewhere between fifteen and seventeen years. I think Mr. Earling's figures, if I recollect right, were sixteen years, and is a fair average of the life of a steel rail.

Q. Will you please state the average life of ties? A. Well, the ties also vary to some extent, with the location and the amount of traffic that is moved over them. My experience is, and I think that of most railway people, that the average life of the ordinary tie in this country is not over eight or nine years, certainly not to exceed ten years. I know, when I was connected with the Minneapolis & St. Louis road and operating a line which extended about forty miles in Dakota, that line was built in the fall of 1885. When I left the Minneapolis & St. Louis in 1894, I think practically all the ties in that line had been *removed*. I don't think there was one per cent. of the original ties left in that line.

Q. Is the life of a tie affected to any extent by the nature of the climate? A. Yes, sir; it is to a considerable extent, I think.

Q. How? A. Well, take it in the south where they have a great deal of rain and it never freezes up, or very seldom

freezes, the rotting process goes on the year round, and the ties would have to be replaced in less time than in the north, where the climate is dryer. I have not a great deal of experience in the South Dakota lines. I understand the general life of a tie in southern railways is not more than five years. In the territory where the Chicago, Milwaukee & St. Paul Railway is located, I think eight or nine years is as much as you can figure on for the life of an average tie.

Q. And the estimate of ten years, made by Mr. Earling, is certainly within— A. I regard it as a very conservative figure, indeed.

Q. Mr. Truesdale, in your opinion, what repairs are required upon buildings and structures, including platforms, stock yards, turntables, pumps, and wind mills, comprising the buildings of a railway company, of a railway which is being operated? A. Taking it over a period of years, I should say that the best the railway company could expect to do would be to renew its structures, such as you have described, at the rate of seven and a half to eight per cent. per annum of their original cost or value. I heard Mr. Earling's evidence on that point, and I thought he was away under the average life of the structures, or rather away over. His estimate of how long they would last was only five per cent. That will take in stockyards. As I recollect his evidence, he stated on all the structures five per cent. would be renewed each year. That would be twenty years. Of course, you cannot get twenty years' life out of the stockyards. I think one year with another you will have to renew your stockyards once in every six or seven years. Station platforms and structures of that kind are the same. They are broken and rotted out away inside of twenty years.

Q. The repairs required by buildings and structures in-

creases somewhat, as the time increases from their original construction, does it not? A. Very materially.

Q. The older a building or structure gets to be, the more repairs it will require. A. Yes, sir. The first ten years comparatively little may be done. The last four or five years of the life of the building it would practically have to be rebuilt.

Q. Spreading the repairs over the entire life of the building or the structure, you estimate that from seven and a half to eight per cent. is a reasonable moderate estimate. A. That is my view of it; yes, sir.

Q. Mr. Earling testified that the fences needed to be removed once in fifteen years. State whether or not you consider that a proper estimate? A. I think that is a very conservative one, sir, especially in a prairie country like South Dakota, where there is a good deal of fence destroyed every year by prairie fires, also a great deal of fence broken down in a country like that every year from the piling up of snow against the fence. My experience in Minnesota and Dakota is, that, after a hard winter, there are miles and miles of fence that have to be rebuilt just from that cause.

Cross-Examination by Mr. Null.

Q. Mr. Truesdale, what was the statement you made about the value or the expenses of handling local or through traffic, two and a half or three times? A. Two and a half or three times as great for the local as for the through traffic. Of course I explained, as I recollect, that is an estimate resulting from my observation and experience as a railroad man. That is not figured out accurately.

Q. That is based purely upon the local freight doing the distributing work and the gathering of the traffic? A. That

applies to the moving of the business, transportation of it over the railroad.

Q. If more expensive, then it should be entitled to a greater reward than the through traffic per mile, should it not? A. A. I think as a rule, that all freight tariffs are figured on the basis that local rates are considered of more value and should renumerate the railway company greater than the through business.

Q. It is a fact, is it not, Mr. Truesdale, what are termed local rates are made higher because of the more extensive and valuable service? A. I think it is considered that is an element which should enter into the making of the local freight rate. It usually does. The passenger rates are usually, or always have been, figured on a straight mileage basis.

Q. You will have no hesitancy in saying that the compensation for local freight service should be proportionately greater than the compensation for through service per mile? A. I think it is generally considered that should enter into the making of the freight rate, and it should be arranged to some extent in reference to that.

Q. And, then, as a matter of fact, the distribution is made upon that theory, is it not? A. What do you mean by distribution?

Q. Distribution of the earnings from freight service. A. Well, I do not believe I know what you mean by that distribution.

Q. Were you connected with the Wisconsin, Minnesota & Pacific Railway? A. I was connected with the Minneapolis & St. Louis Railray which operated the Wisconsin, Minnesota & Pacific Railway.

Q. Now, recognizing the greater value of the local freight service, is it not a fact that, in estimating the share of earnings to be awarded to the Wisconsin, Minnesota & Pacific, you figured—you had a rule by which you allowed them a greater share than a per mile share of freight earnings, allowed them to add one and a half miles for a mile, some basis of that kind which gave them a greater share than a mile? A. I think the original contract with the Minneapolis & St. Louis road allowed the latter company a mile and a half, allowed each company a mile and a quarter. No, allowed the Wisconsin, Minnesota & Pacific Company a mile and a quarter, per mile. That was the contract, however, between the Minneapolis & St. Louis, which involved the construction of the Wisconsin, Minnesota & Pacific from Morton to Watertown, South Dakota, and it was in connection with the construction contract, that traffic contract was made. It is a matter of contract between two different companies.

Q. And it is usual, is it not, in all joint contracts, in all contracts for joint traffic, that the road disposing of the freight as local freight is awarded a greater per cent. of the earnings than it would receive from a division on a mileage basis? A. That is not always the case.

Q. Have you in mind any joint tariff between two lines of road where it is not the case? A. Do you mean between two different lines, or between the lines of the same company?

Q. No, sir, between different companies? A. I cannot just at the moment, call to mind any particular contract where the earnings or business passing over two or more roads is divided on the mileage basis. I know there are some, but at the moment, I cannot call them to mind, and

those I know of that I have in mind are not arrangements that I am personally entirely familiar with. That is the reason I cannot give you a positive and definite answer, on that point.

Q. Is the Minneapolis & St. Louis road operated in connection with the Rock Island Railway? A. Why, the Rock Island has no interest in the Minneapolis & St. Louis. It runs through passenger trains and through freight cars on the system; yes, sir.

Q. The renewal of buildings and structures, of course, would depend largely upon the character of the buildings, would it not? A. Well, of course, that would be true. Brick and iron structures with slight repair would last a great deal longer than the wooden buildings.

Q. Would the per cent. of repairs vary materially? A. Well, yes, I should say it would.

Q. What would you say, Mr. Truesdale, if, say, 100 frame buildings were constructed and well preserved by paint, costing an average of say $600, used as depots, what would you say would be the life of such buildings? A. I do not know of any depots that would average only $600 in cost. I think that is a very cheap buiding that can be put up for that figure. It seems to me they would not last over ten years on an average.

Q. I say well constructed and well preserved with paint? A. Well, I will state that depot buildings costing $600 is something new to me.

Q. Well, put it at $1,000 then. A. Well, I should think fifteen or sixteen years, to keep it in condition for use to accommodate the public, would equal its original cost easy enough.

Q. Now, Mr. Truesdale, according to your idea of this matter, if 100 depot buildings, frame buildings, were constructed, well preserved by paint and proper attention, had been constructed in the year 1880, do you think by the present time, they would have been entirely replaced in the sense of having expended, from year to year, an amount in repairs equal to the original cost of the building? A. I should think fully that. By station buildings, I mean every thing that goes with them, the platform and out buildings and everything connected with them.

Q. How often would these buildings require repainting? A. I should think once in every four or five years, surely.

Q. Now, in considering this matter, are you considering just natural wear and deterioration or are you also taking into consideration accidents, fires, or casualities that sometimes occur? A. I have not taken into consideration fire, because I understand to some extent, at least, the Chicago, Milwaukee & St. Paul Railway Company have indemnity for loss by fire on its building, but other matters like windstorms and other casualities, yes, sir.

Q. What kind of railway ties are you figuring on in your estimate of eight or nine years? A. Well, ties as they run; there are various kinds of ties used in the northern country here, some oak, a great many cedar, a great many hemlock. some white pine, a great many white pine ties.

Q. When you say eight or nine years, you refer to ties generally? A. Yes, sir; as they run.

Q. And not especially with reference to the cedar ties or— A. No, sir; I have not figured on that basis, because it is not always possible to get the certain kind of ties you want to use.

Q. What ones do you think are the most lasting? A.

Well, I think it is generally considered that white oak or white cedar ties will probably last about the same length of time.

Q. Which is the most economical, considering the cost and life together? A. Perhaps the cedar tie is; that is, in these countries where these lines are located.

Q. What is the cost of those cedar ties on the ground, where they are cut and hauled to the railway station? A. Well, sir; I could not tell you that. I have never been connected with roads that have been able to buy its ties right at the stump, as you might say, and I do not know what it costs. My experience in purchasing ties is after they have been transported by rail or water some hundreds of miles.

Q. You think in that climate and territory where the complainant's lines of railway are located, in the State of South Dakota, that Bessemer steel rails reasonably last from fifteen to seventeen years? A. Yes, sir.

Q. That, of course, would be on the assumption that the rails were new when laid? A. Yes, sir.

Q. How long would an iron rail of the same weight last? A. Well, sir, I do not believe I can state from my experience. I have had so very little experience in the use of iron rails. My experience has been almost entirely with the use of the Bessemer steel rail. The only experience I have ever had with iron rails, of any consequence, was on the Minneapolis, & St. Louis, with which I was connected. The iron rail lasted there, under very light traffic, the life of an iron rail was eight or nine years, on an average.

Q. What is the value of the steel rail for scrap, after it is worn out for railway purposes? A. That is the present value?

Q. Yes, sir? A. Now, I cannot give you those figures with any degree of accuracy. I have a general impression that scrap steel rail now cannot be sold for any more than eight or nine dollars per gross ton in Chicago, but I may be way off on that.

Q. Is it not a fact that it is not as valuable for scrap as old iron rails? A. It cannot be sold for as much as scrap iron rails. There may be some special section you could get somewhere near the value of an old iron rail, but ordinarily not.

Q. So that according to your judgment in the matter, if a line of railway had been constructed in Dakota in 1880, and laid with sixty pounds Bessemer rails, it would have been entirely relaid by the present time, would it? A. That is on an average. I think there is possibly some of it where the traffic is heavy and bad grades and curves which might perhaps be laid twice, perhaps oftener than that. Of course, I am not perfectly familiar with the lines of the Chicago, Milwaukee & St. Paul Railway in that territory. I have not been over them to any great extent, and do not know the location of their rails and the volume of traffic going over them. I can only speak of it in a general way.

Q. If their lines were completed in 1880, and laid with iron rails, your judgment is, it would have been entirely relaid long prior to this time? A. I would suppose that to have been the case.

Q. So that, as a matter of fact, from your experience as a railroad man, you would say at the present time, there would be none of the original iron or steel upon those lines? A. Well, I could not say that altogether, because there might have been a certain proportion that only lasted eight or ten years.

Q. I am speaking generally? A. Taking and figuring it up during that period and taking the total number of tons originally laid there, then within that time, or since that date, you find there would have been enough tons of rails sent there to fully replace those originally laid.

Q. Now, Mr. Truesdale, as a mattar of fact, if a line of road was constructed in 1883 and laid with fifty-six pound iron rails, and with the exception of ordinary repairs, the line was not relaid until 1897, you would say that the conditions were very favorable and it was an exceptional case, would you not? A. That is true, or the renewal of those rails might have been postponed for some reason or other when they really ought to have been relaid. It depends a great deal on the condition of the rail, whether they all ought to be removed and the ability of the road to take out those rails, when they ought possibly to have been replaced.

Q. But you would say that if the relaying was required for a period short of fourteen years of service, it is exceptional, would you? A. I should think that was a long life for iron rails.

Q. It is not in harmony with your experience as a railroad man? A. No, sir, it is not what I would suppose a rail would have done.

Q. I understood you to say the relaying might have been postponed. Is it possible to postpone such repairs as that? A. It is possible. I have done it myself under stress of circumsances.

Q. Would you be able to state what the value of the iron rail scap is at the present time or has been in the last year or so? A. Well, I could not tell, with any degree of accuracy without looking the matter up.

Q. Give your best judgment? A. My judgment is that

scap iron brought in the last two years, delivered here in Chicago, somewhere between $12 and $15 a gross ton. I would not want to go on record, absolutely, as saying that is so, without looking it up.

Q. That is iron rail you call scrap? A. Yes, sir.

Q. What is the value of the other scrap iron that comes from the track, switches and so on, in general repairs? What has that been worth the last year or two, such as bolts, spikes, nuts, etc? A. We have not been able to get half as much for that scrap.

Q. You think it is safe to say half as much? A. I should say not more than that.

Q. It sells by weight? A. Yes, sir.

Q. And what is that value as compared with the first cost of that? About what per cent. do you get of the first cost for this material? A. It varies with the article, of course. Take fish plates and angle bars, they are worth less per ton originally than bolts. I do not believe, without sitting down and figuring it out, I could give you the percentage.

Q. About what is the value of new angle bars? A. Well, somewheres between $1.60 and $1.80 per hundred, is my recollection now.

Q. That will be somewhere between $32 and $36 per ton, would it not? A. That is my recollection. I would prefer, before giving any figures, to refresh my memory on the subject.

Q. You think their value as scrap has been anywhere from $5 to $6? A. From $6 to $7.50, I think I figure it. I figure in that old spikes, broken off spikes and ends of spikes, bolts and nuts, and fish plates, that class is worth much less than the rails.

Q. Then upon the illustration which we have been using, the value for scrap is about fifteen to sixteen per cent. of the original cost—no about twenty per cent., about twenty per cent. of the original cost? A. Of those particular items, yes, sir; I should think so.

Q. Is there any salvage from ties that are taken up from the track? A. None to speak of; no, sir.

Q. They are usually consumed by the section men, I suppose? A. The section men and the farmers usually take charge of the ties in the prairie country, and for hauling them away, why they get them.

Q. That is, the company realizes nothing from the old ties? A. I never knew of anything being realized from the sale of old ties, nothing to speak of.

Q. Mr. Truesdale, are you familiar with the joint traffic arrangement of the Rock Island Railway Company in connection with connecting lines in Iowa? A. Yes, sir; I am in a general way familiar with them. I have not in mind the details of all of them.

Q. You are not the officer who negotiates those? A. I usually know all of them which are made, that is since my connection with the road. I do not know of any that have been originally made, made under my supervision.

Q. Did you see Exhibit 13, that was here, Mr. Truesdale, being a book, showing the percentages of the earnings between certain lines of railroad and the Union Pacific Railway Company? A. No, sir; I did not see that. (Witness examining Exhibit 13.)

Q. I show you Exhibit 13, and ask you if your road is a party to that schedule for the division of joint earnings? A. Yes, sir; I see it is. In fact, I knew we had some arrange-

ment similar to this with the Union Pacific Railway Company.

Q. And does your company handle a traffic with the Union Pacific Company and divide the earnings upon that basis? A. We handle a small proportion of the through traffic from Union Pacific points, and such as we do we handle under this percentage; yes, sir.

Q. Is the business which you receive from other connecting lines handled upon a similar division of earnings? A. Well, these matters are all matters of negotiation and contract, one company with another, and I could not hardly say—it is not necessarily the same, or on the same basis, or in any way the same. Wherever we have through traffic arrangements with other roads, we have arrangements with them made on one basis or another, upon which we divide the earnings of that through traffic.

Q. Let me ask you, if you have any arrangement with any road west of the Mississippi river by which you deliver to them freight which the connecting lines handle through their own lines as local freight, the earnings upon which are divided upon a mileage basis between your company and the other roads?

Mr. Peck: Objected to as incompetent and immaterial.

A. Your inquiry applies to business done with other corporations than our own, and is confined to freight traffic only, is that it?

Q. Yes, sir? A. I do not recall one now, on a strictly mileage basis. There may be some of them, however, in which a portion of the business was so done.

Q. It is a fact, however, Mr. Truesdale, that while your company delivers freight to another company west of the

Mississippi river and that company handles it from the junction point as local freight, that the division of earnings is always more liberal to the road handling it as local freight than the division on the mileage basis? A. Those arrangements are matters of negotiation and contract and vary to a great extent. The elements of competition enter into them, as between different lines that have handled the business and when those arrangements are made, the best one is usually made that it is possible to make under those conditions.

Re-direct Examination by Mr. Peck.

Q. Mr. Truesdale, the operating expense of the Chicago, Milwaukee and St. Paul Railway Company for the year, the fiscal year, ending June 30, 1897, was sixty and ninety-four one-hundredths per cent., state whether that is a reasonable result for the operation of the system, for such a system as the Chicago, Milwaukee and St. Paul Railway? A. I think that figure shows careful and economical handling of the property, being operated at that percentage of gross earnings, taking into consideration the conditions existing at that time. I think it rather better than most of the roads did in that territory.

Q. If sixty per cent. was a fair percentage for the operating expenses of a railway system situated as the St. Paul is, what, in your judgment, would be about the percentage of operating expenses to earnings of the lines in South Dakota, considering the difference between local business and the business of the system as a whole? A. The item of expense would be relatively greater in South Dakota, as I explained this morning. Briefly, the expenses of transportation, the business being largely local, as against a great percentage of the business of the lines of the St. Paul road

being through business, and figuring that the transportation expenses average generally somewhere between thirty and thirty-three and one-third per cent. of the total expense, I think that is not very wide of the mark, I should think the percentage of gross earnings in South Dakota, would be somewhere in the neighborhood of eighty-five or ninety per cent.

Re-cross Examination by Mr. Null.

Q. Mr. Truesdale, are you familiar with the rates charged for the transportation of freight between Chicago and South Dakota points, not any particular rate to any particular point, but speaking generally of the subject? A. I cannot say I am. I think we have some rates in effect over our line, in connection with the Burlington, Cedar Rapids & Northern, but I cannot call to mind just what they are I would say, we probably have the same rates in effect in the same territory as the Chicago, Milwaukee and St. Paul has.

Q. Mr. Truesdale, suppose that a given amount of freight was consigned from Chicago to a point fifty miles in South Dakota, and that the haul from here to the South Dakota line was about 500 miles, and from the line into the state fifty miles. That freight is transported from here to the state line as through freight, and from there to the fifty mile terminal as local freight. Now, I understand you to say the expense of transporting that as local freight would be about two and a half times as much as it would for through freight for the same distance? A. That is, certain items of expense. The transportation expenses proper I refer to.

Q. Then considering that as a basis of the proposition, is it not a fact that a division of the earnings upon, mileage basis, giving to South Dakota fifty miles, and to the line be-

tween South Dakota and Chicago 500 miles, would the earnings awarded to South Dakota for fifty miles cover the actual cost of transportation? A. You mean by that, just the movement of the freight on the train, just the actual transportation expenses?

Q. No, I mean the cost. You figure it costs so much to run a railroad? A. Yes, sir.

Q. And that it costs so much to operate a given line of road, doing a local freight business? A. Well, it depends to some extent on what the through rate is, of course, and the commodity and the amount of it.

Q. We submit this proposition to you, Mr. Truesdale. Suppose that a trainload of freight was consigned from Chicago to miscellaneous points, between a point at the state line of South Dakota and a day's run from there into the state, say 130 miles, then the trainload of freight is transported from Chicago to the state line, as through freight; at the state line point it becomes local and is distributed as local freight is ordinarily distributed, from there on over the 130 miles of road, would the proportion that would be awarded to South Dakota, by a mileage basis, covering the cost of maintenance and operation of that 130 miles of road? A. Well, possibly in that particular transaction. There might be some question as to whether or not anything is left after paying cost of operation, maintenance, etc., but it seems to me that the whole business has got to be considered if you want to arrive at whether, as a general proposition, the division of the through rate on inter-state transaction, is a fair and reasonable one or not. There would be another series of transactions wherein such basis would be more unfair to the State of South Dakota. Take the freight business originating at Sioux City, Iowa, where the haul in the State

of Iowa is only a few miles comparatively, and I should say the State of South Dakota on a transaction of that kind was earning more than its due share, and the Iowa end was perhaps not receiving the cost of the transportation in that state. There are other transactions, say for instance, there is a large volume of business between South Dakota points and Minneapolis, where the haul in the State of Minnesota is less than the haul in South Dakota, and in addition, in Minnesota, there is a very expensive terminal to be maintained and operated, and a transaction of that kind, taken on a milaege basis, is more than liberal to South Dakota, so to pick out certain specific transactions such as I have done, I would say that possibly, as I have said, you might show no particular profit in that transaction.

Q. As a matter of fact, upon the freight rates as you understand them generally, for such through business as that, the amount awarded to South Dakota, on a mileage basis, would not cover the expenditures? A. Well, it might do that, and possibly might not. I think it will require some accurate figuring to determine that positively.

Q. If it results in loss, then the more of such business and its transaction, the greater the loss from the operation of the South Dakota line? A. That is true, unless that loss is compensated for, and offset on other transactions; there were matters as I have indicated more favorable to South Dakota than that that particular one is.

Q. If the Chicago, Milwaukee & St. Paul Railway Company operated 1,100 miles of railway in South Dakota, constituting about one-sixth of the miles of their system, and from the operation of that 1,100 miles of railroad, they receive freight traffic, from which their system realized a revenue of $6,000,000 per annum, which is in effect twenty-three

per cent. of the total freight revenue of the system, would you say that the lines in South Dakota were or were not profitable to the company? A. That would depend to a very great extent on what burden the Chicago, Milwaukee & St. Paul Railway Company assumed, in the way of interest and other fixed charges on the South Dakota line. That is a very large factor entering into the matter.

Q. We do not assume they have any unusual burdens. We simply assume that they invested the money, the amount to cover these lines. A. They have their obligations out on those lines, on which they have to pay interest or dividends or something.

Q. Mr. Truesdale, if you could secure 1,100 miles of railway in South Dakota, which would furnish to your railway system $6,000,000 of business annually, I mean both in and out of the state, would you regard that as a profitable enterprise? A. Well, as I said a moment ago, it would depend somewhat on the obligation assumed, in the nature of interest, or other charges, whether we would consider it profitable. We have a large amount of money invested in Kansas, a state similarly situated to South Dakota. With reference to the Kansas line, I would say that considering the burdens we assumed when we built the Kansas line, I have a great question whether they are of any advantage to the Rock Island Railroad. I presume we get as much business from our lines in Kansas as the St. Paul does from its 1,100 miles in South Dakota.

Q. Of course you know what it costs to construct these prairie railroads? A. Yes, sir.

Q. Now, without asking you to state what that is, but assuming you could acquire the 1,100 miles of road at what you regard them to be worth, and assuming the capitaliza-

tion cost you four per cent. per annum, what would you say upon the proposition then? A. Well, I still think, as I said before I do not care to risk an opinion on it. In the first place, these railroads have not, as a rule, been built with four per cent. money, and we cannot figure on that basis.

Q. When you assume the operating expense would be about eighty-five to ninety per cent., what would that be eighty-five or ninety per cent. of? A. Such gross earnings as would fairly be apportioned to it, in the adjustment of its account, if separate accounts were kept between South Dakota lines and other lines.

Q. Upon what basis of division of those earnings? A. I should say upon a mileage basis; I do not see any other you could use, in determining the relative earnings of a system of road like the Chicago, Milwaukee and St. Paul Railway, located in several states.

Q. So your position is that, according to your best judgment, the operating expenses in South Dakota would be from eighty-five to ninety per cent. of the earnings from operation, based upon a division upon the mileage basis? A. Well, I took the earnings and relative operating expenses of the system as a whole, giving the earnings on a mileage basis. I understand that is the way the earnings have been apportioned, and figuring on that basis, and assuming a large percentage of the South Dakota business is local business, which I understand is the case, in my judgment it would figure in that way.

Q. Now, if the earnings on operation on the mileage basis was $1,000,000 per annum, you would say the operating expenses would not exceed $850,000 to $900,000? A. I figured it on an estimated basis, as I say.

Q. And upon the showing as you understand it, and your

knowledge of the operation and economical management of the company, you think that the traffic in South Dakota ought to bear from ten to fifteen per cent. profit with the earnings divided upon a mileage basis. A. What do you mean by "ought to bear"?

Q. I mean if figured on that basis it would bear that, as compared with what the system as a whole bears.

(Not answered.)

Thereupon the taking of testimony in said cause was adjourned to 2 o'clock p. m.

January 26, 1898. 2 p. m.

C. H. CHAPPELL, a witness called on behalf of the complainant, being first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Chappell, please state what business you are now engaged in? A. I am vice president and general manager of the Chicago and Alton Railroad.

Q. How long have you been vice president and general manager of the Chicago and Alton Railroad? A. Vice president since 1894 and general manager since 1883.

Q. When did you enter the railway service? A. In August, 1857.

Q. Have you been in railway service, continuously, since that time? A. Yes, sir.

Q. With what company did you first engage in railway service? A. With the Chicago, Burlington and Quincy.

Q. In what capacity did you enter the service of that company? A. Freight brakeman.

Q. How long were you a freight brakeman? A. Three years.

Q. After that, in what service were you next engaged? A. Next as trainmaster and train dispatcher.

Q. Directly from brakeman? A. Yes, sir.

Q. Where were your headquarters at that time, while you were trainmaster and train dispatcher? A. Galesburg, Illinois.

Q. What was the next position that you occupied in the railway service? A. Division superintendent.

Q. And of what road? A. Of the Chicago, Burlington and Quincy, at Aurora, Illinois.

Q. How long were you division superintendent of the Chicago, Burlington and Quincy Road? A. Four years.

Q. What was your next service? A. Division superintendent of the Union Pacific Railway at Cheyenne.

Q. How long were you engaged in that service? A. About two years.

Q. What was the next service you was engaged in? A. Assistant superintendent one year and division superintendent one year, of the Chicago, Burlington and Quincy Road.

Q. After that, what service did you engage in? A. General superintendent of the Missouri, Kansas and Texas.

Q. Where were your headquarters while you were with, the Missouri, Kansas and Texas Road? A. Sedalia, Missouri.

Q. What was your next service? A. I was assistant general superintendent of the Missouri Pacific Railway.

Q. With headquarters at what point? A. At St. Louis, Missouri.

Q. And how long did you remain with the Missouri Pacific? A. One year.

Q. After that, what service did you engage in? A. Division superintendent of the Wabash Railway at Springfield, Illinois.

Q. How long did you remain with the Wabash? A. Three years.

Q. What business did you next engage in? A. Assistant general superintendent of the Chicago and Alton.

Q. The company in whose service you are now employed? A. Yes, sir.

Q. What positions have you held with the Chicago and Alton Company? A. Assistant general superintendent, general superintendent, assistant general manager, general manager and vice president.

Q. What are the duties of the position you now hold as vice president and general manager of the Chicago and Alton Road? A. I have general charge of all matters connected with the operation and maintenance of the Chicago and Alton Railroad.

Q. Subject only to the orders of the president? A. And the directors, of course.

Q. And the board of directors? A. Yes, sir.

Q. What is the entire length of your service with railway companies? A. Forty years.

Q. Were you present at the examination of Mr. A. J. Earling day before yesterday, in this room? A. I was.

Q. And you heard his testimony? A. Yes, sir.

Q. Do you remember his testimony in respect to the difference in the expense of conducting local traffic, as compared with through traffic? A. Yes, sir.

Q. I will ask you to state whether, in your opinion, his testimony upon that subject was a correct statement of the relation that local traffic bears to through traffic, in the matter of expense of operation—transportation expenses?

Mr. Null: That is objected to as immaterial and incompetent, no proper foundation having been laid for it.

A. I think Mr. Earling's evidence in that matter was very conservative and I fully agree with him that the increased expense in handling local business was as much or more than he stated.

Q. During your service in the various positions which you have named, has it been your duty and have you, in fact, made a study of all questions affecting the expense of conducting transportation? A. Yes, sir.

Q. And have you had experience, during that time, in the matter of maintenance? A. I have.

Q. In your judgment, Mr. Chappell, if you were called upon to express an opinion as to the relative cost of transportation upon local traffic and through traffic, what would be you opinion? A. As to relative cost?

Q. Yes, sir. A. I think the local traffic costs three or four times as much as the through traffic.

Q. Please explain fully and in your own language your reasons for expressing that opinion? A. The first and principal reason is the fact that, in local trains, they ordinarily carry a very small tonnage; the local trains are necessarily run with very few cars. They have a great deal of work to do at the different stations and the wear and tear is very great for that reason, and the trainmen on local trains all receive larger pay per mile than on through trains.

Q. Does the fact that a through train is an earning train

from the point at which it starts to its destination, while a local train is composed at the start of fewer cars and the load which it is carrying is variable, from station to station, enter into your estimate? A. Certainly, that is one of the principal considerations.

Q. Is there any respect in which the expenses of a through train are as great as the expenses of a local train, with respect to the item of fuel consumed, that you now think of; except in the item of fuel consumed? A. I think not.

Q. And how much difference is there in the amount of fuel consumed in a run of one hundred miles by local train, considering the increased time it takes to run it and the stopping and switching, compared with the through trains which run through without stopping, except for water and coal; will one nearly balance the other? A. A local train can very easily burn more coal in a run of one hundred miles than a through train.

Q. Because of the switching and the times it stops, the coal in the locomotive burning all the time? A. Yes; and switching is very hard on coal consumption; a great deal of that is done on local trains.

Q. You have testified that you have had experience in the maintenance of railroads; among the principal items of the expense of maintenance are rails and ties, are they not? A. Yes, sir.

Q. Did you hear Mr. Earling's testimony as to the average length of life of a rail and of a tie? A. Yes, sir.

Q. Will you state what your opinion is upon that subject? A. I think his statement is a very conservative one; rather below than over the average.

Q. His testimony was that sixteen years is the average

life of a rail and ten years is the average life of a tie and you think that is a conservative and fair statement? A. I do.

Q. And in your opinion, is it a correct statement? A. As near as can be arrived at.

Q. Are you acquainted with the Chicago, Milwaukee and St. Paul system, in a general way, I mean? A. Yes, sir; in a general way.

Q. You have for many years been stationed at Chicago, have you not? A. Yes, sir.

Q. And during most of your railroad life you have been connected with the western roads? A. Altogether.

Q. The Chicago, Milwaukee and St. Paul Railroad is a well known western road, is it not? A. Yes, sir.

Q. Have, you by reason of the position you hold and have held for many years, been obliged, in the performance of your own duties, to study, to some extent, the operation and the management of other western roads, including the Chicago, Milwaukee and St. Paul Road? A. Yes, sir.

Q. You are, to some extent, say, between Chicago and Kansas City, a competitive road with the Chicago, Milwaukee and St. Paul? A. Yes, sir.

Q. I will ask you, then, to state from your knowledge and acquaintance with the management of the Chicago, Milwaukee and St. Paul Railway, whether in your opinion it has been capably, judiciously and economically managed?

Mr. Null: That is objected to on the ground that no proper foundation has been laid.

A. In my opinion, the Chicago, Milwaukee and St. Paul Railroad is one of the best managed roads in the western country or in the eastern country.

Q. Are you acquainted with Mr. Roswell Miller, president of the company? A. I am.

Q. With Mr. A. J. Earling, the vice president and general manager? A. Yes, sir.

Q. And with Mr. A. C. Bird, the general traffic manager? A. Yes, sir.

Q. Have you, for several years, known of their methods of conducting the business of the St. Paul Railway and in a general way, the results of their management of the property? A. Yes, sir.

Q. Mr. Chappell, do you know from published reports or otherwise, what the operating expense of the Chicago, Milwaukee and St. Paul Railway Company was, for the year ending June 30, 1897? A. I don't remember that I have seen that.

Q. If they were sixty and ninety-four one-hundredths per cent. of the gross earnings, what would you say as to that being a fair showing of the expenses of operating the system? A. I should consider it a very excellent showing; it is very difficult to manage any of the western railways on sixty per cent. of the earnings.

Q. Would the fact that the operating expenses of the Chicago, Milwaukee and St. Paul Railway were 60.94 per cent. of the gross earnings indicate that it has been a judiciously operated and conducted railroad? A. Yes, sir.

Q. Have you, in the conduct of the business entrusted to you upon your railway, had occasion to consider the subject of repairs to buildings and structures? A. Yes, sir.

Q. You have to consider that, do you not? A. Yes, sir.

Q. What percentage, upon the original cost of buildings and structures, including platforms, station houses, round

houses, water stations, stock yards and turntables, is, in your opinion, annually required for repairs? A. In my judgment, an average of ten per cent.

Q. Then Mr. Earling's estimate of five per cent. you would consider considerably below the actual necessary expenses? A. Entirely too low, in my judgment.

Q. Is it not true that the annual expenses of repairs of buildings and structures is less, immediately and a few years after their construction, than after several years have elapsed? A. Certainly.

Q. As time elapses, the percentage of repairs increases? A. Yes, sir.

Q. I will ask you to state whether or not, in your experience, you find that the making of proper repairs from time to time, increases the entire life of structures? A. That is correct as to a certain part of those buildings. Sstock yards and some other classes of buildings would have to be renewed once in ten years, to say nothing of repairs upon them during that time.

Q. And when a railway company is compelled, by financial conditions or impaired earnings or for other reasons, to omit repairs that are needed, the future expense of repairs will be increased, will it not? A. Certainly.

Q. Mr. Earling testified that fences needed to be renewed as often as once in fifteen years; state whether in your opinion that is a fair estimate? A. My judgment would be that twelve years would be nearer correct than fifteen years.

Q. Is all of your testimony upon these questions based upon your own experience and your own familiarity with the operation and maintenance of railways? A. Yes, sir.

Q. After forty years experience? A. Yes, sir.

Cross-Examination by Mr. Null.

Q. What is the average expense of operating a through freight train per mile? A. About 50 cents, I should say; for an individual train, the average cost is about 75 cents.

Q. Referring to the direct cost of running a train, you say it is about 50 cents a mile? A. Yes.

Q. Now, do you think the operation of a local freight train would be from one dollar to one dollar and a half per train mile? A. No, sir; I would not put it in that way; I would base the cost of handling local freight on the relative earnings of the two trains.

Q. So that when you say it costs from two and one-half to three times as much, you have reference to the expenses, as compared with the earnings of the train? A. Yes, sir; certainly.

Q. But the transportaiton per mile is not materially different? A. Well, considerably more, but not, of course, three or four times. We pay way-freight engineers 4½ cents a mile, and through freight 4 cents, and fireman in like proportions.

Q. Well, if a through freight train costs 50 cents a mile, about what is your best judgment of the cost of local freight? A. From sixty-five to seventy-five cents.

Q. That would be from thirty to forty-five per cent. more? A. Yes, sir.

Q. If the earnings upon the system stood in the relation of sixty per cent.—if the operating expenses upon the system stood in the relation to the earnings as sixty per cent. per hundred, what would you say would be the relative per cent. as compared with the local freight revenue? A. I do not exactly understand the drift of that question.

Q. Take it upon the general traffic of the system, the earnings are $1 as against 60 cents expenses; how much expense would be required to earn $1 in local freight traffic? A. I should say 90 cents, somewhere in that vicinity.

Q. That would only leave then, in your judgment, 10 cents to go to maintenance of road and interest and dividends and taxes; the 60 per cent. of gross earning represent all that expense? A. Yes.

Q. So that in your estimate you have included fixed charges and all expenses? A. Not fixed charges, but all expenses of maintenance.

Q. I said this would leave 10 cents then to go to payment of expenses and dividends? A. And fixed charges, you said; maintenance.

Q. Let us have a complete understanding; what do you include in the estimate of fixed charges? A. Interest on bonds.

Q. Dividends on your stock? A. That is not a fixed charge. Payment on leases, if there are any, and any expense that is similar to interest on bonds.

Q. And taxes? A. Well, taxes are sometimes included in fixed charges and sometimes not.

Q. Sometimes classed as operating expenses? A. Generally kept separate and stated separate.

Q. Then in your estimate and understanding of what this sixty per cent. represents, you understand that that represents everything except interest and dividends? A. Yes, and taxes probably.

Q. So, then, to understand you properly, this 10 cents that would be earned on local traffic, would be the fund from which interest and dividend would have to be paid? A. Yes, sir.

Q. And if that was not sufficient to pay the interest and dividends, the operation of local freight trains would be at a loss? A. Yes, sir.

Q. Now, in the case of the earning of a million of dollars on local freight business, your understanding is that there would be about $100,000 of profit, over and above operating expenses? A. Based upon the general proposition of sixty per cent. cost on the whole business; of course, these figures are all problematical. It might be very easily that the local business cost more than you get for it.

Q. And this $100,000 then, would be practically all the money with which to pay interest and dividends? A. Yes, sir.

Q. Let me ask you, if, in your judgment, that would pay any considerable portion of interest and dividends? A. No, I think not.

Q. It would pay a very small part of it? A. Very small.

Q. Now, in estimating these earnings and expenses upon local business, have you assumed that the earnings were divided upon a mileage basis? A. Yes, sir; that is the usual method.

Q. So that, in applying this to business in South Dakota, the earnings from inter-state shipments would be apportioned to South Dakota upon a mileage basis? A. Yes, sir.

Q. Do you think it a good business enterprise for railroads to have branch lines whose business is confined largely to local business? A. I think that phase of railway business has been greatly over done; a great many branch lines built that were never needed and that do not pay the people that put their money into them.

Q. And you do not think it is a good business proposition? A. No, sir; it is not.

Q. Suppose that a branch line consisting of one-seventeenth of the mileage of a system, should produce twenty-three per cent. of the total freight revenues of the system, would you say that it was a good business proposition? A. Well, I could not answer that without knowing more in detail.

Q. Suppose that the total freight revenues of the Chicago Milwaukee and St. Paul Railway system were $22,000,000, for the year ending June the 30th, 1897, and that of that $22,000,000, $5,000,000 was earned from business that originated or terminated upon this seventeen per cent. of its lines? A. I should think the business would be of some value—some considerable value to the Chicago, Milwaukee and St. Paul system.

Q. And that, while the earnings apportioned upon the mileage basis, would not cover the expenses of operating branch lines, yet considering the revenue to the system, you would say that it was a fair business proposition? A. It might be; I should think it would be.

Q. Suppose that a train should start at a point 100 miles west of the east state line of the State of South Dakota and run as a local train to the state line, 100 miles, and should gather along that route twenty cars of wheat, making an average haul of fifty miles and then the train should be taken from there to Chicago, a distance of 500 miles; that the earnings derived from that transaction, would be $55 per car or $1,100 for the train, what would you say was an equitable division of those earnings? A. As between the 100 miles and the 500 miles?

Q. Yes? A. The only recognized division is on a mileage basis.

Q. What would you say was an equitable division? A. I think that is entirely equitable, it is considered so among railroad men, the nearest to a fair division that can be had.

Q. That division would give $100 for the operation of the train 100 miles and would give the main line $1,000 for the operation of that train 500 miles? A. The return of the train another 500 miles; these cars have got to go back.

Q. That would not affect the relative value, would it? A. $2 per mile would be good fair freight per mile, but you must run the train back.

Q. The branch line has to haul the empties to the other end the same, so that the relative positions are the same? A. Certainly.

Q. Would you say that was an equitable division of those earnings? A. That is the usual mode.

Q. And the usual mode then would give $1,000 for a 500 mile haul on through freight as against $100 for a 100 mile haul on local freight? A. Yes; according to your figures.

Q. And yet it seems to be conceded that the expense of operating the local freight is two and one-half to three times as great as the through freights? A. Yes, sir.

Q. Your company, I presume, have joint traffic arrangements with other roads; agreements for the division of earnings on joint traffic? A. Yes, sir.

Q. Let me ask you if you have any joint traffic agreement or arrangement with any western road, by which such an earning as I have indicated in this illustration would be divided upon any such a basis? A. Well, that is entirely a different proposition; we have such contracts with our own leased lines.

Q. That is, you make such divisions as this in your own

railroad family, so to speak? A. By contract with lines that we lease; yes, sir.

Q. And control? A. And control by lease; yes, sir.

Q. But have you any such arrangement with roads not connected with your system or management? A. I think we have.

Q. Have you a division upon any such basis as I have indicated? A. Yes; that is the usual division, unless there is competition or some undue influence that changes it; territorial location sometimes changes it.

Q. Will you name any one road west of the Mississippi river, with which you divide joint earnings upon a mileage basis? A. I think we do with the Missouri Pacific road, at St. Louis.

Q. At what point do you receive freight from the Missouri Pacific? A. At St. Louis.

Q. Is that Chicago traffic largely? A. Yes, sir.

Q. And where does this traffic originate upon the Missouri Pacific? A. In the State of Missouri.

Q. And you have a joint tariff with them? A. Yes, sir.

Q. From the point at which the freight originates to its destination, Chicago? A. Those joint tariffs govern most of that business.

Q. You divide the joint earnings with the Missouri Pacific upon such a basis as I have indicated, in the illustration I have given you? A. Upon a mileage basis as near as possible. Of course, there are bridge arbitraries that may come out sometimes or some other thing that may interfere with it.

Q. When you say mileage basis, you mean it is simply

prorated so much for the mile for the whole haul? A. Yes, sir.

Q. Under that arrangement, does the Missouri Pacific count more for a mile than one mile? A. No, sir; that is done west of the Missouri river to some extent.

Q. Now, does that obtain between any points on the Missouri Pacific where there is competition? A. Yes, sir.

Q. You spoke about the renewal of rails, do you think that Mr. Earling was conservative when he placed it at sixteen years? A. Yes, sir.

Q. What do you think about it; do you think it will last that long or is that a fair average? A. That is a fair average; in some places they will last five years, in other places eighteen years, perhaps. This average of the whole depends largely upon grades, curvature and traffic over them.

Q. So that, in your judgment, if a line of railroad was constructed in 1880, by the present time the rails would all be relaid? A. Yes, sir.

Q. And practically none of the old rails would be there now? A. No, sir.

Q. What would you say with reference to iron rails? A. The life of iron rails is very much shorter.

Q. What is the length of time which iron rails are supposed to last? A. That depends greatly upon the quality of iron; some of the later iron rails that we laid, lasted hardly a year, some two and some three years, but it was a very poor quality of iron rail.

Q. Well, take the iron that was laid about 1880, fifty-six pound rail, what would you say? A. Well, I should think five years would be the extreme life under any ordinary traffic. If the traffic was very, very light, it might last longer.

Q. So, that if iron laid in 1880, upon the lines of the Chicago, Milwaukee and St. Paul Road in South Dakota, has not been renewed until the year 1897, it is a remarkable exception to the rule, is it? A. That might be quite possible on a branch line where there is little or no traffic.

Mr. Peck: There is no testimony that it has not been relaid since 1887.

Mr. Null: What do you say with reference to the average life of ties? A. I think Mr. Earling's estimate of ten years is very conservative.

Q. Very conservative, is it? A. I hardly think they would last that long. From his standpoint, it is very conservative it seems to me, in this case.

Q. That would be the extreme, would it not, rather than a conservative estimate? A. I think Mr. Earling's statement is very conservative and very fair. I think it is very doubtful whether the average life of ties is more than eight years or ten, as a whole. Many of them come out in five years.

Q. So, then, in your judgment, these lines of railway that were constructed from 1881 to 1883, they would probably have been relaid twice with reference to ties? A. Of course, I know nothing about that climate or its effect upon ties, but certainly we have relaid a great many miles of road twice within that time.

Q. And according to your experience that is probably the case? A. Yes, sir.

Q. The road you are connected with is the Chicago and Alton? A. The Chicago and Alton.

Q. Does your line operate either directly or indirectly any line of railway in Minnesota or the Dakotas? A. No, sir.

Q. It extends south-westerly? A. From Chicago to St. Louis, St. Louis to Kansas City, Kansas City to Chicago; a triangle.

Q. What lines do you operate? A. Our own lines; we have a triangle.

Q. What lines do you operate by lease? A. The Louisiana & Missouri and the St. Louis, Kansas City & Chicago, both within the State of Missouri.

Q. Is the Missouri Pacific an independent company? A. Yes, sir.

Q. There is no relation between the management of your company and the Missouri Pacific? A. None whatever.

Q. And where does it extend, which direction from St. Louis? A. St. Louis to Texas, St. Louis to Kansas City, Atchison, Leavenworth and Omaha, branch lines in Missouri, Arkansas and various places.

Q. Does your company operate some line in Iowa? A. No, sir.

A. C. BIRD, re-called for further cross-examination, testified as follows:

Examined by Mr. Null.

Paper marked Exhibit 24 (defendants') for identification.

Q. Mr. Bird, I show you a tariff, marked Exhibit 24, and ask you to state what it is? A. This is Chicago, Milwaukee & St. Paul tariff, numbered 12,640, issued August 23, 1895, being substantially a reprint of previously existing rates on all classes, between Chicago, Milwaukee and Racine Junction on the one hand, and stations in Illinois, Wisconsin, Michigan, Iowa, Minnesota and North and South Dakota on the other hand

Q. Mr. Bird, how do the rates in this tariff, Exhibit 24, compare with the rates named in your inter-state distance-tariff? A. I cannot state the per cent. accurately. It varies It is different from the rates in the inter-state tariff. In no case are they higher than the inter-state rates. Wherever there is a variation they are lower than the inter-state distance tariff rates.

Q. Take Aberdeen as an illustration: what would be the tariff, under the inter-state distance tariff, from Chicago to Aberdeen upon first class? A. It would be $1.42.

Q. And the rate on the Chicago terminal is $1.40? A. The rate on the Chicago terminal tariff is $1.40, on first class.

Q. What is the rate from Chicago to Minnesota Transfer, first class? A. 60 cents.

Q. What is the rate from Chicago to Sioux City? A. 80 cents.

Q. What is the rate from Sioux City to Aberdeen? A. 80 cents.

Q. What is the rate from Chicago to Sioux Falls? A. 86 cents.

Q. That is on tariffs that are now in force? A. Yes; I believe so. That difference was established by the Inter-state Commerce Commission and a certain per cent. of the Chicago–Sioux City rate was made by the order of that Commission.

Q. What is the basis? A. I do not remember the per-centage, but it was a fixed percentage; I do not know whether it applied to all classes or not, but at any rate, my recollection is that the relation between the rates between Chicago and Sioux City and Chicago and Sioux Falls was fixed by the Inter-state Commerce Commission.

Q. Let me call your attention to class A and compare the rates between Sioux City and Sioux Falls; compare the Sioux City and Sioux Falls rate? A. From where?

Q. Chicago? A. Sioux Falls, class A rate is 34½ cents; the Sioux City class A rate is 32 cents, there is a difference of 2½ cents in favor of Sioux City.

Q. What I understand you to say is, the rate from Chicago to Aberdeen is made up on the inter-state distance tariff and is what? A. $1.42.

Q. The rate from Chicago to Minnesota Transfer is 60 cents? A. Yes, sir.

Q. And what is the rate from Minnesota Transfer to Aberdeen? A. The Minneapolis rate applies from the twin cities, from Minneapolis, Minnesota Transfer and St. Paul. The answers I am making you on these rates, each question as to these rates, involves an exact recollection of the mileage—of the distance—and I may be in error in quoting the distance, but as near as I can figure it on the moment, the answers are correct, but there are a great many junction points and you have got to take care to get these distances to each junction point exactly right, to make a correct answer. The rate from Minneapolis and St. Paul and Minnesota Transfer to Aberdeen is 88 cents, first class.

Q. Besides this terminal tariff applying between Chicago and Milwaukee on the one hand and South Dakota points upon the other, you have other tariffs applying to the shipment of coal from Chicago and Milwaukee to South Dakota points? A. We have a tariff on coal from Chicago, Racine, Milwaukee, Green Bay and from St. Paul and Minneapolis, Lake Superior points—Duluth and Superior—to points in South Dakota.

Q. Is there a rate other and different than the rates disclosed by this terminal tariff from Chicago to South Dakota points? A. The terminal tariff from Chicago that you have marked as Exhibit 24, does not quote rates on coal.

Q. Will you procure a tariff which controls the shipment of coal to South Dakota points? A. From where?

Q. From Chicago or Lake Superior ports. A. I will make a note of that if it is satisfactory.

Q. And the tariffs applying to the shipment of wheat and cattle from South Dakota to Chicago and Minneapolis and St. Paul? A. I will have those tariffs presently.

Q. Mr. Bird, upon business originating or terminating on the Northern Pacific, have you any joint tariffs with them? A. From where?

Q. From points on the Chicago, Milwaukee and St. Paul Railway lines to points upon the Northern Pacific lines? A. When I recall the fact, there is a tariff on live stock—a joint tariff, and I think it is on live stock from some point on the Northern Pacific road to Omaha or South Omaha, and my present impression is that there is also a joint tariff from some points in the cattle country on the Northern Pacific to Chicago?

Q. It is a fact, is it not, Mr. Bird, that in the shipment of freight from points upon the Chicago, Milwaukee and St. Paul Railway lines, to points in North Dakota upon the Northern Pacific, that the Northern Pacific charges its local rate from the junction point to destination. A. Generally speaking, that is the rule.

Q. And you have no arrangement with the Northern Pacific similar to that disclosed by Exhibit 13 of your arrangement with the Union Pacific? A. Oh, yes, we have

arrangements, through rates and divisions with the Northern Pacific Railroad on traffic to and from Chicago and the larger trade centers, but upon freight picked up at local points in the interior on our system or to be laid down at local points in the interior on their system, the through rates are made, by the addition of the locals.

Q. So that on freight from Chicago to Bismark the Northern Pacific would charge its local rate from Minnesota Transfer to Bismark? A. No, I don't think so.

Q. What would be the charge? A. I will have to refer to the tariffs on that point to get the truth of it. I am not sure whether we put on through rates on our own responsibility, or whether we have a through tariff. As a general proposition, I think the interior business, the freight on the interior business from the interior of our lines, would be the sum of the added locals, but whether that rule applies from Chicago to-day, I don't know, and I cannot tell without looking at the tariff.

Q. What would be the rate from Chicago to Sioux City, under the inter-state distance tariff, on first class? A. $1.22.

Q. And the Chicago tariff rate to Sioux City is what? A Terminal tariff rate from Chicago to Sioux City is 80 cents first class.

Q. What would be the rate under the inter-state distance tariff from Chicago to Mitchell? A. I don't know without a guide to give me distances; I can't remember the distance to every station and state the matter correctly; these distances which I have before me are between junction points only.

Q. Is the rate to Sioux City under the Chicago terminal tariff, applying between Chicago and Sioux City, affected in

any way by the maximum rates in force in Iowa? A. Yes, sir.

Q. To what extent or in what manner? A. The rate from Chicago to the Missouri river crossings or Missouri river cities cannot exceed the rate from the Mississippi river crossing, to the Missouri river crossing by more than a sum which has been used for some years and known as the Mississippi river differential; that is to say, 20 cents on first class, 20 cents on second class, 10 cents on third class, and 5 cents on fourth class and fifth class, and the lower classes in about the same proportion. That differential represents the difference between the rates from eastern manufacturing cities to Chicago and the rates from the same points of origin to other Mississippi river crossings; then the rate from Mississippi river to the Missouri river is the maximum; from the Mississippi river to the Missouri river is the Iowa distance tariff, for the short line across the State of Iowa. In fact, it is governed by the Iowa distance tariff together with the Missouri distance tariff, because the same factors control there. It is the crossing rate, the rate between the two rivers or opposing lines. It is only 206 miles from the City of Hannibal to the City of St. Joe; I do not remember the shortest rail distance across the State of Iowa, but the rate from Chicago first-class to the Missouri river cannot well be more than 20 cents per 100 pounds, on first-class rate, more than the rate of the Iowa commissioners on the shortest haul between the two rivers.

Q. So that, as I understand you now, the 80 cent rate to Sioux City consists of a 20 cent rate to the Mississippi river, and a 60 cent rate across the State of Iowa? A. Approximately.

Q. Now, what is the rate under the Chicago and South Dakota terminal, from Chicago to Mitchell? A. $1 05.

Q. The rate from Chicago to Mitchell is not affected in any way by the rate to Sioux City, is it? A. The rates in a given district are more or less interdependent.

Q. What is the rate from Sioux City to Mitchell? A. 45 cents.

Q. What is the rate between Sioux Falls and Mitchell? A. The first-class rate from Sioux Falls to Mitchell is 35 cents.

Q. Now, Mr. Bird, the rate from Chicago to Sioux Falls is 84 cents, and from Sioux Falls to Mitchell is 35 cents, making a total of $1.19? A. Yes.

Q. The rate from Chicago to Sioux City is 80 cents and from Sioux City to Mitchell is 45 cents? A. Yes, sir.

Q. Total, $1.25? And the rate from Chicago to Mitchell is $1.05? A. Yes, sir; I believe that to be the rate. I think I testified to that a moment ago.

Q. Now, suppose a reduction of twenty per cent. were made upon either the rate from Sioux City or from Sioux Falls to Mitchell, how would that affect or cause you to lower the Chicago rate of $1.05? A. The reduction of twenty per cent?

Q. Yes? A. The mere reduction of rates from Sioux Falls or from Sioux City to Mitchell, if it were not followed by reductions anywhere else, if there were no other action than that, would not necessarily reduce the rate from Chicago to Mitchell, but so far as the revenue of our company is concerned, it would not make very much difference what the reduction was between here and Mitchell because there is no business; not of any consequence. Business does not go from Chicago to any great extent.

Q. Where does that come from? A. Nearer by distributing points.

Q. St. Paul, Minneapolis? A. And Sioux City, Sioux Falls, Aberdeen and Sheldon.

Q. So that in your opinion, then, the mere reduction of the local rate from Sioux Falls to Mitchell or from Sioux City to Mitchell, would not affect the revenues of your company substantially? A. I did not testify to that; on the contrary, I say it would very much affect the revenues of the company. What I said in my testimony just now, was this, that if there was a reduction of twenty per cent. of the rate from Sioux Falls or Sioux City to Mitchell, if not followed by any other reductions, it would not necessarily compel us to reduce our rates from Chicago to Mitchell. It is different, quite different.

Q. In what respect would the reduction of the local rate affect your inter-state rates from Chicago or Minneapolis and St. Paul to Aberdeen? A. What do you refer to as a reduction of local rates; inter-state distance tariffs?

Q. Yes. A. In this respect the inter-state distance tariffs are maximum rate sheets; they represent the highest rate that can be exacted. The inter-state tariff that applies between Minnesota and South Dakota could not reasonably be on a higher scale than the tariffs which apply locally in Dakota. If the maximum rate of Dakota is reduced twenty per cent. it would bring the basis down lower than the local tariff or maximum rate schedule of Minnesota and in that case the distance tariff between the two states could not, with any sort of propriety, be made greater than the Dakota local distance tariff. The reduction of twenty per cent. of maximum rates in South Dakota would, in a great measure, reduce the terminal rates between St. Paul, Minneapolis

and Minnesota Transfer and Dakota points, and in the same manner, other states would be affected, and inter-state distance tariff rates applying between Dakota and other states would also be affected. It is simply a matter of practice and of custom and public demand, if you please, that maimum rates should not be greater in Minnesota and Wisconsin and Michigan, than they are in Dakota. They would have to come down. That would reduce the rates upon which ninety-five per cent. of our traffic is carried. I am speaking now of traffic to and from Dakota and in Dakota.

Q. Have you compared the inter-state distance tariff applicable to Minnesota, with the schedule of maximum rates adopted by the commissioners of South Dakota? A. I have not tabulated a statement but I have examined the two sets of rates, side by side, somewhat.

Q. Now, if the schedule of maximum rates adopted by the commissioners of South Dakota, is not lower than the schedule of maximum rates in Minnesota, then the reduction in South Dakota, would not have the effect of which you have been speaking? A. Yes; it would; the reduction of the maximum rates in South Dakota, ordered by the South Dakota Railroad Commissioners is twenty per cent., and I do not believe it possible to exact a higher scale of rates between South Dakota and Minnesota than the maximum rates of South Dakota, whatever they may be, and they have been reduced by this arrangement, or would be reduced twenty per cent.

Q. Let me ask you, Mr. Bird, to indicate to us a rate from Minneapolis or St. Paul, to any point in South Dakota where your terminal tariff is as high as the rate would be by adding the Minnesota rate and the South Dakota rate

together? A. It would be, from a traffic standpoint, perfectly absurd to make a rate between the two states, by adding the two local rates up to the state line. It would be entirely wrong to attempt to establish tariffs generally on that basis.

Q. What you mean is, that you could not establish a 400 mile rate from St. Paul to a point in South Dakota for less than the Minnesota 400 mile rate; is that what you mean? A. No; I don't mean that at all. I said I did not believe it was possible to establish or maintain, we will say, a rate for 400 miles westerly, from Minneapolis into South Dakota on a higher basis than the 400 mile rate of South Dakota local distance tariff, whatever it might be.

Q. Why could not that be done? A. I will tell you to-morrow; it is a great big question. It embraces the whole theory, Mr. Null, of the work of rate making. I have tried to cover it all in my statements a few minutes ago.

Q. Let me ask you, Mr. Bird, again, can you indicate to us, at this time, any rate from Minneapolis to South Dakota, for any given distance from 200 to 400 miles, wherein your terminal tariff exceeds the schedule of maximum rates adopted by the railroad commissioners, for a like distance? A. I should have to examine the tariffs in detail, to answerthe question; I cannot do it at this late hour to-night. In a general way I should answer your question, certainly, we can show you a great many points where the application of the commissioners' rate of South Dakota, applied to the traffic from Minneapolis, would reduce the rate.

Q. Mr. Bird, have you an arrangement with other roads occupying the same territory, for instance, the North-Western, governing the disposition of freight received at a

station upon your line destined for North-Western stations, say in South Dakota? A. We interchange freight with that road.

Q. Now, what is the rule with reference to the transfer of this freight, as to whether it is transferred at the first junction point or the last junction point? A. If the freight is destined to a local station on a connecting road, it is delivered to that road at the junction point nearest to the point of origin, if that creates a reasonably direct route. If the route could be materially shortened, by carrying it to some other junction point on our road much further from the initial point, giving the North-Western a shorter haul, it would be delivered in that way.

Q. But all other things being equal it would be delivered at your first junction point? A. There is no question about other things being equal; it is delivered at the first junction point on the direct line, if it is for a local point on the other road.

Q. How are those earnings apportioned between the two roads? A. Each company takes its local.

Q. That is, you take your local from the origin to the junction point? A. Yes, sir.

Q. And the other road takes its local rate from the junction point to destination? A. Yes; unless it happens to be competitive business; there might be, in rare cases, some exceptional rule, where we have through rates and divisions, but I don't recall any such arrangement.

Whereupon the further taking of testimony herein was adjourned to January 27, A. D. 1898, to be continued at the same place, at the hour of 10 o'clock of said date.

January 27, 1898, 10 o'clock a. m.

Cross-Examination of A. C. Bird, continued, by Mr. Null.

Q. Mr. Bird, what is the terminal tariff from St. Paul to Woonsocket? A. The terminal tariff rate on first class?

Q. Yes, sir. A. 80 cents per 100 pounds.

Q. And what is the same rate to Yankton? A. From Minneapolis to Yankton?

Q. Yes, sir. A. The first class rate from Minneapolis to Yankton is 75 cents per 100 pounds.

Q. I have a note here of 71 cents. Possibly I am mistaken? A. It is a change of rate. It is an amendment that covers it. The current rate is 71 cents instead of 75.

The Witness: Repeat those questions.

(Questions read.)

A. That is right.

Q. From St. Paul to Mitchell? A. Mitchell?

Q. Yes, sir. A. From St. Paul to Mitchell 75 cents per 100 on first class.

Q. From St. Paul to Sioux Falls? A. 57 cents per 100 pounds on first class.

Q. St. Paul to Kimball? A. It is 81 cents, first class, per 100.

Q. Now, Mr. Bird, assuming that the distance from St. Paul to Woonsocket is 390 miles, what would be the rate on the inter-state distance tariff? A. It would depend on whether the distance stated by you is the distance by the short line.

Q. I am assuming that the distance is 390 miles by Austin and 398 by Aberdeen. A. To what place?

Q. Woonsocket. A. 390 miles short line, 109 cents per 100.

Q. Assuming that the distance to Yankton is 397 miles, what would be the distance tariff? A. 110 cents.

Q. Assuming that the distance to Mitchell is 396 miles, what would be the inter-state distance tariff rate? A. 110 cents.

Q. Assuming that the distance to Sioux Falls is 300 miles, what would be the distance tariff rate? A. 100 cents.

Q. Assuming that the distance to Kimball is 443 miles, what would be the rate? A. 115 cents.

Q. Have you one of the commissioners' schedules there? A. I have not. The commissioners' schedule is 20 per cent. of that. That is what they were you know.

Q. Now, Mr. Bird, your rates upon coal, from the lake ports and from Chicago and Milwaukee, are very much lower than would be indicated by your inter-state distance tariff? A. I could not say very much lower; they are less than distance tariff.

Q. And your rates for the shipment of cattle from South Dakota to St. Paul, Omaha and Chicago, are less than the rates indicated by the inter-state distance tariff? A. I am not able to answer definitely, but in a general way I should say that it would not in any case be higher than the distance tariff, and in some cases that it would necessarily be less.

Cross-Examination, continued, by Mr. Temple.

Q. Mr. Bird, why was the month of September, 1897, not a fair month? A. Because it was greater than an average month.

Q. Is that one of the grain months? A. Yes, sir.

Q. One of the principal grain months? A. One of the grain months.

Q. Is it one of the principal stock months? A. I am not clear about the stock. The largest traffic obtained by our company in South Dakota is wheat; the largest single item of traffic is wheat. It begins to move in August, and the early part of the shipping season is generally the largest part.

Q. Then, August and September would be the largest months? A. There are two or three months, possibly four, in which the company earns all the net money which it ever gets in South Dakota. Three or four months in the year the company earns about all the profit, or net money, which it receives from South Dakota business during the whole year. The months in which the grain is moving, probably August, September, October and November. I think it begins to fall off in November.

Q. Would November be an average month? A. No, sir; you could not get an average month without taking the whole year's business and dividing it. You would have to take a number of years to get a fair average, but May, June and July—April, May, June and July are probably the poorest months in the year. August and September would average, one year with another, the best months.

Q. Mr. Bird, if a whole year's business is added up and divided by twelve and that amount proves to be as much as the business for September, would not that be an average month? A. It would not demonstrate it was an average month. You could not get a fair average of business tonnage by the use of even a full calendar year. You must take a series of years to get a true average.

Q. What is the proportion of passenger expenses to the

expenses of freight traffic on your system? A. I do not know.

Q. If you should take the through rate between any two given points, do you say it would not necessarily be the sum of the combined local rates between those points? A. No, sir; it would not.

Q. Would the through rate be necessarily higher or lower than the sum of the local rates? A. Logically it could not be higher than the added local rates.

Q. Practically, is it ever higher? A. I do not think it could be. You might find cases where through rates were temporarily greater than the combined locals, but such rate would be the result of temporary disturbances in rates. You would not find that condition to exist any length of time anywhere in railway traffic.

Q. Then, in taking a through rate between two given points, you do not take the local rates and add them together to make the through rate or to fix it. A. Not that I know of. I do not recall any such practice in making rates on our road, on our system. There might have been in some cases, but not as a general proposition.

Q. Your local rates in South Dakota are relatively higher than your local rates in Iowa, are they not? A. The local rates given in South Dakota are higher than they are for an equal distance in Iowa.

Q. And are not your through rates, between a point in South Dakota and a point in Iowa, or extending into that state, higher, because the local rate in South Dakota is higher? A. Yes, sir.

Q. Mr. Bird, is there any necessary proportion between the through rates and the local rates. Is there any neces-

sary proportion of through rates between any two different points and the local rates between those points, and what is that proportion? A. I do not understand the question.

Q. I will put it in this form. If the through rate between two given points is not the sum of the local rates in force between those points, then what proportion is there, if any, between the through rate and the local rates? A. Do you mean what relation there would be?

Q. I use the term proportion. A. I cannot tell it. I understand you want me to say what relation there should be between the through rate and the combined locals.

Q. If the through rate between any two given points is not the sum of the local rates, then how far or in what way is the local rate a factor in fixing the through rate? A. That is a very broad question and cannot be intelligently answered from the standpoint of a single rate between two points. There might be isolated cases where the sum of the two locals, or the combined locals, would have a decided effect in determining the through rate, but I do not recall any instance where that would be true, of traffic confined to a single system of road, one road or one system. The rate from Aberdeen to Edgeley and the rate from Edgeley to a point on the Northern Pacific added together might determine precisely what the through rate should be from Aberdeen to that point. But the rate from Aberdeen to Redfield and from Redfield to Mitchell might not determine the rate to be charged from Aberdeen to Mitchell.

Q. In the case of through rates between competitive points, to what extent is the local rate a factor in fixing the through rate? A. It is limited—the local rate is a limit.

Q. What do you mean by saying it is a limit? A. The through rate could not be higher than the local tariff basis.

Q. It may be indefinitely lower? A. It may be lower. I can not admit the word "indefinitely."

Q. What advantage, Mr. Bird, does the Milwaukee system secure over its competitors for the Union Pacific business, by the large percentage which the Milwaukee Company allows the Union Pacific in the division of the joint earnings, on the traffic originating on the Union Pacific road? A. It derives no advantage because it does not allow the Union Pacific Railroad Company any greater proportion than is allowed by other connecting lines of the Union Pacific, by competitors of the Milwaukee. In other words, the division of through rates, that accrue to our company, is accorded by the Union Pacific to all other companies, so that all the connections of the Union Pacific are on an equality with each other.

Q. What proportion of east-bound business originating on the Union Pacific, does the Milwaukee system receive, as compared with the other competing lines? A. I do not know.

Q. Is it relatively greater or less than the other competing lines or any of them? A. That is merely a matter of opinion or a guess, whether they do any more than others.

Q. How is it compared with the North-Western? A. I presume we receive less revenue from traffic connections with the Union Pacific than the North-Western—that is, through traffic given us by the Union Pacific.

Q. Does the Union Pacific give the North-Western system all the traffic that it can absolutely control? A. No, sir.

Q. With reference now, to freight shipments originating on the Union Pacific system, do the shippers themselves, or the railroad company, determine the destination of those shipments? That is to say, whether they shall come to

Chicago or go to St. Louis, or southern points? A. I take it for granted that the shipper always determines the destination of his freight.

Re-direct Examination by Mr. Peck.

Q. Mr. Bird, state in what respect or relation,—or the relation of the Chicago, Milwaukee and St. Paul Railway to its lines in South Dakota, differs from its relation to the Union Pacific and the Northern Pacific Railway system, and explain fully in what the difference consists? A. The Chicago, Milwaukee and St. Paul Railway Company owns the lines in South Dakota, and it is entitled to receive a fair income or fair return, upon the amount of the cost of the property and its equipment——

Q Its invesment? A. Yes, sir; it is entitled to some benefit, some compensation, which will equal a fair return upon the amount invested, and the terminal facilities in other states, which are necessary and proper for the conduct of the South Dakota business, while there is no such obligation on the Union Pacific. It don't make any difference to us whether those roads make money or not, whether they are solvent or insolvent, is no concern of the Chicago, Milwaukee and St. Paul Railway Company. The operation of the Union Pacific and Northern Pacific, as railroads, makes it necessary for those companies to receive large quantities of material for renewals, repairs and operation. That is, construction material, fuel, and other supplies, of which our company, with other carriers, receives a large share of that business, at a fair, reasonable compensation.

Q. For hauling? A. For the transportation of that class of property, three or four or five hundred miles, more or less, while the same material is required for the mainte-

nance and operation of the Dakota lines, and that material must be hauled by the company, without compensation, for a distance of three, four or five hundred miles.

Q. Mr. Bird, you say that the South Dakota lines are not charged anything for material or supplies hauled by those lines. They could not be charged anything, could they Mr. Bird? A. I do not see how they could be charged anything for that service, any more than I can see how we can divide the through rate, from one point to another point on a part of the system, but the service has to be performed, and the service costs money.

Q. The South Dakota lines are a part of the lines of the Chicago, Milwaukee and St. Paul Railway Company? A. Yes, sir.

Q. And when the St. Paul Company wants supplies for its South Dakota lines, it asks for them? A. Yes, sir.

Q. And if it charged anything, it would be charging itself and paying itself? A. Yes, sir.

Q. Which would be an absurdity on the face of it, would it not? A. Yes, sir; a farce, certainly.

Q. The result of this situation is, that whatever it costs to transport supplies, material, equipment, fuel or anything else to South Dakota, for the use of the South Dakota lines, is an expense paid by the Chicago, Milwaukee and St. Paul Railway Company? A. Yes, sir; it is an expense chargeable to the traffic. It might be stated in this manner: Assuming, that it would be in round numbers 500 miles from Chicago to a point in South Dakota, the border line,—substantially the same distance as to Omaha and Council Bluffs, for all practical purposes,—to move a given quantity of freight, rails, ties, fuel, etc., to Dakota, we ought to have at the very least calculation, six or seven and a half mills,

per ton a mile. We would get nothing on that 500 miles, but would get at least six or seven mills, or one cent a ton a mile, for the Union Pacific service, which shows the additional cost involved in taking care of the South Dakota business, to that which is involved in securing business from the Northern Pacific or Union Pacific Railways, or any other connection.

Q. You get something for hauling material to Omaha for the Union Pacific Railway, but you get nothing for hauling material to any portion of your own lines, for use of the South Dakota part of the system? A. That is right.

Q. Your attention was called by counsel for defendants to what you designate as a "terminal tariff" on freight out of Sioux City, Sioux Falls and Aberdeen, to points in South Dakota, and also from Minneapolis, St. Paul, and perhaps other points, to points in South Dakota. I wish you would state why those tariffs have been put in force and why the company has not or does not adhere to the inter-state distance tariff, generally in force out of those cities? A. For every rate made, there is a good and sufficient reason, as we suppose. Those reasons vary somewhat, according to circumstances, competition, etc., but rates are made upon general principles as far as possible, and what I wish to say, in answer to your question, is to be received as not applying absolutely, but substantially. The terminal rates that apply into and out of South Dakota, are governed chiefly by the conditions which affect the traffic to and from Dakota and St. Paul—Minneapolis and Minnesota transfer. The distance from Minneapolis to Aberdeen is about 280 miles. The terminal tariff rate from Minneapolis to Aberdeen is substantially the inter-state distance tariff. It may vary one or two cents out $1.40, or thereabouts, but it is practically the distance tariff, which is the same as the local state

tariff of South Dakota. I cannot, without investigation, say why there is a fractional difference between the terminal tariff, from Minneapolis to Aberdeen, and the inter state distance tariff. Now, the reason for the rate between Minneapolis and Aberdeen, is also the reason why subtantially the same rate applies from St. Paul to all points on our line, between Aberdeen and Sioux Falls and to all points in the lower portion of Eastern South Dakota. The short line distance from Minneapolis to Mitchell, is by the Omaha road and the rate of that company from Minneapolis to Mitchell, must be about the same as our rate from Minneapolis to Aberdeen The rate of the Great Northern Company from Minneapolis to Huron, must be approximately the same as our rate from Minneapolis to Aberdeen. In other words, the geographical condition (the railway geography of that district) prevents the application of a distance tariff, from Minneapolis to all points in South Dakota, by any one railway company. I will explain further; while our rate from Minneapolis to Aberdeen is practically the inter-state distance tariff rate, we cannot exact a materially higher rate from Minneapolis, by way of Aberdeen, to any point in South Dakota in the James River Valley, in the direction of Mitchell, Yankton and Sioux Falls, or any other common point, than our rate from Minneapolis to Aberdeen, so that, while we adhere to the distance tariff, as a basing proposition, when our line is the short line, we must accept very much less than the distance tariff basis, to points on railways, where our line is the long line, and this is as true of our competitors as it is of our own traffic. To illustrate still further, the rate from Minneapolis to Wolsey cannot be materially different than the rate of the Great Northern or of the North Western, and Omaha to Huron, and the rate from Minneapolis to Huron, by the short line, must be about the same as our rate from Minneapolis to Aberdeen and, for our

longer haul to Wolsey, we get little, if any, more revenue than for the shorter haul to Aberdeen. And for this reason, we must accept less than a distance tariff basis of rates, from Minneapolis to points on the James River Division, south of Aberdeen and on the Madison line south of Bristol, or to points on the Andover line north of Andover, and points on the James River line north of Aberdeen. The rates from Minneapolis to Monango, by the Sioux, are doubtless, about the same as would be obtained, by the operation of the South Dakota and Minnesota inter-state distance tariff. The rates to those points could not be materially different from our rates from Minneapolis to Aberdeen. Therefore, our rates from Minneapolis to points on our line north of Aberdeen are substantially the same as the rate to Aberdeen and, therefore, on a lower scale than the distance tariff. The terminal rates from Minneapolis to points on the Hastings and Dakota Division, adjacent to the state line or adjacent to Big Stone City or Ortonville, are regulated to some extent, by the Minnesota distance tariff. The rate from Minneapolis to Big Stone City cannot be materially greater than the rate from Minneapolis to Ortonville, and any illustration of our rates, or any comparison of our rate from Minneapolis to Ortonville with our Dakota distance tariff is unfair, because the Minnesota tariff must apply to within less than a mile of Big Stone City, South Dakota, which is on the boundary line between Minnesota and South Dakota.

Q. Mr. Bird, the terminal tariff from large centers of trade like Chicago, St. Paul and Minneapolis are made, because of the large volume of merchandise being shipped from those points to other towns in the west, and that condition enters into the reason for those terminal tariffs, in addition to the reasons you have already given, does it? A. There ought to be, and would be, terminal tariffs from large cities,

even if the rate of those tariffs were the same as the distance tariff rates. A terminal tariff would be necessary, as a matter of convenience, an absolute necessity to the clerks who bill large quantities of freight every day. Without a terminal tariff they would have to ascertain, in each case, the distance from their station and then what rates applied for such distance. The terminal tariff is made for convenience in way billing freight, regardless of the fact that circumstances may make it necessary to accept lower rates from such terminal points than are provided by the local maximum schedule.

Q. Sioux Falls, Aberdeen and Sioux City are not large commercial centers, are they? A. No, sir: not relatively speaking.

Q. And you stated, I believe in the beginning of your direct examination that those terminal tariffs were put in at the solicitation of business men or others, who desired to be encouraged in building up a jobbing business at those points, in competition with other points outside of South Dakota. Will you state whether I am correct in my understanding of your testimony? A. The terminal tariffs from Sioux Falls, Aberdeen and Sioux City to points in South Dakota were the result of the irrepressible conflict between local jobbers in various locations. There has been, for years, a constant demand for a system of rates, that would place every town of any importance on the system on an exact parity with every other town. To illustrate, by the use of a statement made in my testimony yesterday, the rate from Chicago to Sioux Falls is 84 cents, first class. First class rates were used all through the examination, for the purpose of illustration, and are so used now. The existing rate from Sioux Falls to Mitchell is 35 cents, so

that it costs a man in Sioux Falls, to ship in from Chicago and out to Mitchell, 84 cents in and 35 cents out, a total of $1.19. Now the complaints of Sioux City jobbers are that Sioux City pays 80 cents in from Chicago and 45 cents out, a total of $1.25, combining $1.25 for Sioux City and only $1.19 for the Sioux Falls jobber, and that illustrates the character of the demand throughout the entire system, Minneapolis, St. Paul, Winona, La Crosse, Madison, Owatonna, and every town along the Mississippi river. Every one of those cities demanding a system which would combine in and out of their towns, precisely as it did in all other places. It is an impossibility to arrive at that result. The chief contention is between the merchants of Sioux Falls and Si ux City, acting rather together than against each other, at that time, to get a system of rates, for the purpose of distribution, that would put them on a parity with the jobbers in the larger cities, and the chief complaint was on account of the twin city jobbers, not, because the rates from Chicago to the twin cities plus the rate from the twin cities to Aberdeen, Mitchell, Pierre and Chamberlain, etc., would be so much less in the aggregate than the combination via Sioux City or Sioux Falls, but because the rates from the chief sources of supply, such as eastern and north-eastern manufacturing states, caused by cheaper water rates, via Lake Superior ports, during six or eight months of the year, is so much lower than the combined rates via Chicago. The conclusion, after many conferences, was that we would attempt a system of terminal rates that would, so far as possible, equalize the difference which they complained of, or, in other words, place upon the railroad company the burden which they, the jobbers, had borne, by reason of the competition which was not chargeable to our company. During the process of these negotiations, a

great deal of rivalry was shown or developed between Sioux Falls jobbers and Sioux City jobbers. The final conclusion was, that, for a given distance out of Sioux City or out of Aberdeen or out of Sioux Falls, the last two being the only distributing points within South Dakota within our reach, the tariff should be for equal distances, about the same as for an equal distance out of the twin cities. Now, that was the general idea, as to the rates which have been used here for the purpose of comparison with the distance tariffs of South Dakota, but they do not apply in every case, because, take a shipment from Sioux falls to Mitchell by the St. Paul lines, you go by the way of Canton, and the line is longer than by the Omaha road from Sioux Falls to Mitchell. Therefore, we might be carrying—I am not sure but we are carrying,—the freight at a lower rate, per ton per mile, between those points, than the Omaha Company. The Omaha rate might be in strict accordance with the inter-state tariff, applying in other parts of the state, and the long line would make the rate less, per ton per mile, in order to meet the short line rate. To illustrate still further, the St. Paul Company's line from Sioux City to Mitchell is the short line. The Omaha Company's line from Sioux City to Mitchell is nearly twice as long. The long line goes out of Sioux City to the east of north, to Sioux Falls Junction, thence west, via La Verne and Salem, to Mitchell. When they get to Sioux Falls Junction, they are farther away from Mitchell than when they started, so that the meeting of the rate of the short line, by this long line, greatly reduces the basis in some locations. I should, perhaps, testify, that lately the Omaha Company has withdrawn from competition for that particular business. It accepted lower rates from Sioux City to points between Sioux Falls and Mitchell than would otherwise have applied, and it was held to be a discrimination.

Q. You say "held," Mr. Bird; by that you mean claimed, do you not? A. It was claimed by the Sioux Falls people to be a discrimination, and I believe it has been abandoned in that particular case.

Q. Your attention was also called to the terminal tariff from Minneapolis and St. Paul to Big Stone City, which, as you stated, was 56 cents, whereas, on the same line to Aberdeen it is 80 cents, to Wolsey, 88 cents, to Woonsocket 80 cents, to Redfield 88 cents. Now, state why these rates from Minneapolis and St. Paul to points in South Dakota are so much at varience with the inter-state distance tariff? A. I have attempted to cover that ground already. The rate from Minneapolis to Big Stone City, South Dakota, as I stated awhile ago, cannot well be materially greater than the rate from Minneapolis to Ortonville, Minnesota, for the reason Ortonville is governed by the Minnesota tariff, and the rate from Minneapolis to points in Dakota are substantially the inter-state distance tariff rates. That is also true of rates from Minneapolis to points in the south part of the state, but we have a long haul from Minneapolis to Aberdeen, where our rates do approximate the distance tariff. When we get north and south of Aberdeen and north and south of Andover, we must then observe the distance between the long line rate and the short line rate.

Q. Ortonville and Big Stone City are on the state line between Minnesota and South Dakota, are they not? A. Yes, sir.

Q. The one is in Minnesota and the other in South Dakota? A. That is right.

Q. And the rates must be the same, regardless of the state either of them happens to be in? A. Yes, sir.

Q. You stated that the distance from Chicago to the

South Dakota state line is about 500 miles? A. It is a little more than that. It is approximately 500 miles.

Q. State, between what stations the principal volume of traffic into and out of South Dakota passes, what proportion of it goes to and from Chicago and South Dakota points? A. My opinion is, without having a statement made up, an opinion derived from observation and experience in this district for fifteen years, is that the lines east of the Mississippi river do not receive any material or extensive benefit from the traffic from and to South Dakota. The grain tonnage is by far the largest item of traffic produced along the lines in that state. A very large percentage of that goes to Minneapolis. I have no doubt that coal and lumber are the items of next greatest importance. I do not know whether coal is greater than lumber, but the two together are very large, nearly all of which goes from points in the vicinity of Minneapolis or Lake Superior ports north of Minneapolis. Live stock goes, in considerable proportions, to Minneapolis, but in my judgment, in a much greater proportion, to Sioux City, and that is the heft of the business, Now, as to merchandise, the business has been growing smaller and smaller for fifteen years. That is, the business that goes from eastern terminals, Chicago, Milwaukee and Lake Michigan ports, grows smaller every year. I had occasion several years ago to analyze the freight traffic received on the Hastings and Dakota Division, which then extended out to a point west of Aberdeen—Ipswich. My recollection is, that seventy-eight per cent. of that traffic, for twelve consecutive months, was from St. Paul and Minneapolis. Circumstances affecting traffic generally for the last five years, have made it more difficult year after year, to secure any of the long haul business from

Chicago or Milwaukee to that territory, as against the twin cities, Sioux City and other similar distributing points, such as Duluth, West Superior. Those last named towns are on Lake Superior and have come into comparatively great prominence, within the last five years, as distributing centers. They have been very prominent as receiving points for grain, for a long time. So, I should say, we do not get a full haul to Chicago, on five per cent. of the traffic to and from stations in South Dakota. I am only approximating it, making what I believe to be a correct estimate, but it is certainly a very small percentage of the total traffic. I should say that our coal tariff rate from Chicago to Mitchell and other stations in that territory, when taken into account along with rates which are made from the east via St. Paul and Minneapolis, are such as to practically prohibit any considerable movement of business from Chicago. The difference in rates from the seaboard markets to Minneapolis and St. Paul and to Chicago is very small. That is, the tariff from Chicago via St. Paul and Minneapolis to points west is almost prohibitory.

Q. On traffic from South Dakota points to Sioux City and to Minneapolis and St. Paul, through Ortonville almost the entire mileage in the first case is in South Dakota, and in the second case about as much mileage in Minnesota as in South Dakota? A. Not quite. You take the business to and from Sioux City, it is all practically in South Dakota. The haul in Iowa from the line, that is, crossing the Big Sioux, is so short as not to give the Iowa line credit for a sufficient amount of money to pay switching charges, etc., whereas, we are doing business between points in South Dakota, especially points on the upper half of the James river line on the cross line between Orient and Eureka and the branch north of Aberdeen and the line north of Andover

and the branch south of Bristol to Elrod, then in that case a very large percentage of the haul is in South Dakota, so much so as to give it a very liberal showing if, in the distribution of the earnings, it is assigned a pro rata division, based on actual mileage. Especially that is true, in view of the fact that the line in Minnesota gets no credit allowance for extraordinary terminal expenses which do not occur in South Dakota.

Q. You stated in your testimony, when you were on the on the stand a day or two ago, that the company could afford to pay seventy-five per cent. of the revenue if it did not have to sustain the property in South Dakota, and also, I think, one hundred and twenty-five per cent. was mentioned by you. Will you state why you made that statement and what elements you took into consideration, in making that estimate? A. What I think I said, and what I intended, was, that there was traffic or times when we could better afford to pay seventy-five per cent. of the through rate, for somebody to bring it to the state line, than to go and get it ourselves, and there were certain occasions, when it would be better to pay one hundred and twenty-five per cent. to somebody to bring it to the state line and not have to go after it, because of the extraordinary expenses attached to the services, at those particular times, in South Dakota.

Cross-Examination by Mr. Null.

Q. Mr. Bird, if the earnings from the South Dakota business was four hundred thousand dollars ($400,000) a month, as the total revenue from the business derived from South Dakota and twenty-five per cent. of that amout, or $100,000 was South Dakota's share, apportioned upon a mileage basis, that would indicate a haul outside of the state three times as long as the haul inside of the state, would it not? A. By no means.

Q. Mr. Bird, if the total revenue from South Dakota inter-state business, being apportioned to South Dakota on a mileage basis, twenty-five per cent. of it should be apportioned to South Dakota, it would indicate that only twenty-five per cent. of the haul had been in that state, would it not? A. I am not clear about that. I am not so sure of it. That requires a little figuring and a little thought. I do not think it could be taken for granted that twenty-five per cent. of the haul is in the state.

Q. If the earnings were proportioned strictly upon a mileage basis, and assuming that that apportionment should yield to South Dakota, twenty-five per cent. of the earnings, would it not indicate that twenty-five per cent. of the haul had been in that state? A. I think not. Merchandise is a higher rate business comparitively. It may have had considerable merchandise traffic from Sioux City to points in South Dakota, and a ton of freight of that kind will count up very rapidly as compared to a ton of coal from Minneapolis to South Dakota stations.

Q. D you think that element might make a difference? A. I do not think that the fact that a certain percentage of inter-state traffic of South Dakota is credited to South Dakota lines, is any indication whatever that that same percentage indicates the proportion of the haul in states other than South Dakota. I do not think it has any connection whatever.

Q. Do I understand you to mean by your testimony, that after this conflict which you spoke of, between the jobbers in the various cities in that territory, a schedule of rates has been put in effect or put in force which, for a given distance, gives the cities about the same rate? A. That was the original plan and intention and is now the intention,

subject to this modification, that when the long line meets the short line rate, it creates a departure from the general rule.

Q. Is there any reason, Mr. Bird, then, for the difference in the rates, the distance being equal, between Sioux City and Hawarden and Sioux Falls and Hawarden? A. Well, I will have to study the map a little. Yes, Hawarden is in the State of Iowa, is it not?

Q. Yes, sir. A. The rate between Sioux City and Hawarden would be governed by the Iowa tariff, the maximum rate. The rate between Hawarden and Sioux Falls is not necessarily governed by the Iowa distance tariff. It might well be made subject to the inter-state distance tariff.

Q. So that this equalization of rates you have been speaking of, relates only to South Dakota transportation? A. No, sir; it does not. I do not think I stated so. It does not apply wholly to South Dakota.

Q. You have testified that the division of the earnings, upon a mileage basis, is fair in South Dakota, by reason of the fact that you have to pay the interest on the bonds and maintenance of the road in South Dakota? A. That and other reasons.

Q. Yes, sir. So that, in fixing the division of earnings, upon the mileage basis, you have made that the basis for division, taking into consideration the payment of these fixed charges and maintenance by the St. Paul Company? A. I don't get that question quite. Do you mean to ask if the reason why, in the distribution of the earnings between the lines in various states, we fix upon a mileage rate is, because of the cost of construction and maintenance in those various states?

Q. I ask you if that is taken into consideration in de-

termining the question as to whether it should be divided on the mileage basis or not? A. I am not prepared to answer definitely on that subject, because, speaking from a practical standpoint, I should say it was none of my business.

Q. Now, Mr. Bird, I understand you to say, this question of apportioning earnings to different divisions of your road or system, is not a matter that comes under the supervision of your department. Is that what you mean? A. I say it is not a traffic question, because there is no division of earnings in fact. Therefore it does not touch the traffic department.

Q. And it is not a department with which you have any concern? A. Except in this case, where it is used as an argument for reducing our rate. Anything touching the rate system is a matter touching our department.

Q. Mr. Bird, in determining these questions of the basis for a division or apportionment of earnings, do you take any part in the solution of that problem, or in outlining the plan for a division of earnings? A. I do not.

Q. So that you are not personally cognizant of the elements which enter in that problem and are considered by the officers of the company who adopt that rule? A. I cannot say that, because I am in touch with them. I hear about things; I know of these things. Being right alongside of the men, I hear the discussion and participate in it, although it is not a matter coming within my jurisdiction. I know the why and wherefore; that is the extent of my knowledge.

Q. If the basis of division, on the mileage basis, was adopted, taking into consideration the fact that the company had those fixed charges and costs of maintenance to pay, then would it not be unfair to still deduct those fixed

charges and costs of maintenance from the small earnings apportioned to South Dakota? A. In the first place the earnings apportioned to South Dakota are the reverse of small. They are very large, in proportion to the service, to other portions of the line, manifestly larger.

Q. Do you wish that to stand as your answer to my question? A. Yes, sir.

Adjourned to 2 o'clock p. m.

January 27, 1898, 2 o'clock p. m.

A. C. BIRD, recalled for further direct examination, testified as follows:

Examination by Mr. Peck.

Q. Mr. Bird, what effect would a reduction of the inter-state distance tariff in South Dakota have upon terminal tariff rates, say, from Minneapolis and St. Paul and cities similarly situated, to the State of South Dakota?

Mr. Temple: That is objected to as cumulative; the witness has already gone over the ground thoroughly, both on direct and cross-examination.

A. The effect would be to reduce the terminal tariff rates to some degree, or substantially to the same extent as the reduction of the inter-state distance tariff rates.

Q. Will you explain why? A. I believe that a reduction of the inter-state distance tariff rates would force an equal reduction of the terminal tariff rates from St. Paul and Minneapolis and other cities similarly located, to South Dakota points.

Q. Explain why that result would necessarily follow the reduction of the inter-state distance tariff applicable to South

Dakota? A. I can only answer that by citing a single instance which is illustrative of the whole situation.

The terminal tariff rate from Minneapolis to Aberdeen, as has been frequently said, is substantially on the inter-state distance tariff basis. The rates from Minneapolis to Huron and Wolsey and towns in that immediate vicinity, are also substantially or approximately, based upon the inter-state tariff there, so that could not be a very great difference between our rates from Minneapolis to Aberdeen, or our rate from Minneapolis to Wolsey.

Our haul to Wolsey would be as much longer than our haul to Aberdeen, as the length of our haul from Aberdeen to Wolsey, and we would haul that additional distance for practically no addition to the rates, and consequently our rates from Minneapolis to Wolsey are less, per ton per mile, than our South Dakota local and inter-state distance tariff basis, and any cause which would requrie us to reduce the rate from Minneapolis to Aberdeen, would also compel a corresponding reduction from Minneapolis to Huron and other points in that vicinity, so that, the relative conditions, everything, in fact, would be just as it is now, except that the whole scale would be that much lower. The same thing would be true of Mitchell, Sioux Falls, Yankton and every other competitive point in that territory, unless the Chicago, Milwaukee and St. Paul Railway should withdraw from business, except to points where it is the short line. In such case it would be obliged to make the same rate to local stations in that vicinity as might be made by the short line to the competitive stations, and the general result would be the same; that is to say, we would have to reduce our rates just as much below the inter-state distance tariff rates, in case of a further reduction, as they are now below the inter-state tariff.

Q. When there are different rates between two points, some shorter and some longer, which road fixes what the rate shall be between those two points that all must conform to. A. Generally the inter-state or local state distance tariff applies; the rate fixes itself. It is not a question of one road agreeing that the other road shall fix the rate, but it is fixed by the application of the rate to the short line.

Q. I mean does the short line fix the rate? A. The rate is made by the short line; the short line governs the rate, that is the rule.

Q. Is there any shorter line between Minneapolis and St. Paul and Aberdeen, than our line? A. There is not.

Q. And our line is therefore enabled to maintain its maximum rates of the inter-state distance tariff? A. Yes, sir.

Q. Well, are there points on the line of the Chicago, Milwaukee and St. Paul Railway system, south of Aberdeen, reached by other by railways, upon which the distance is shorter from Minneapolis and St. Paul? A. Yes, sir.

Q. Well, what situation arises at such points? A. The rate is made upon the short line mileage.

Q. Well, when the rate is made upon the short line mileage, what does this company have to do in order to do any business at those points? A. In order to do any business at such points, or at points adjacent thereto, it has to make the short line rate.

Q. It makes a rate less than its inter-state distance tariff rate and that is what is called a terminal rate, is it not? A. Yes, sir.

Q. It is the shorter line that conforms to the inter-state distance tariff and the longer line to meet that condition has to make a correspondingly less rate? A. The long line is

obliged to make a lower rate, per ton per mile, than the shorter line.

Q. And that makes what is called the "terminal rate"? A. It is generally so designated.

Q. If, then, a reduction is made in the distance tariff of the shorter line, what is the effect upon the tariff of the long line? A. The co-relation of the rates remains the same only the scale is reduced?

Q. They fall together? A. Yes, sir, necessarily.

Q. What effect would a reduction of the inter-state distance tariff rate in South Dakota, have upon terminal tariff out of Chicago, for instance, to South Dakota points? A. It would have the effect of either reducing the terminal tariff rate from Chicago to South Dakota points or of a practical withdrawal from the business.

Q. Well, what relation to that question do the Cities of Minneapolis and St. Paul have? A. A reduction of the inter-state distance tariff rates would reduce the rates of the terminal tariffs from Minneapolis and St. Paul to all principal points in South Dakota. In order to make a schedule of tariff rates to points in South Dakota, it is necessary to to preserve a certain relation between the terminal tariffs from Chicago to those points and the terminal tariffs from Minneapolis to those points, because the governing or dominant factor of the rates, from Chicago and other Lake Michigan ports to points west of Minneapolis, is the rate basis from eastern manufacturing points of supply to St. Paul and to Chicago, respectively. There is a certain average difference between the two and when we come to make rates from Chicago to points in South Dakota, such as will take a reasonable portion of the business, we can only exact such rates from Chicago as exceed the rates from Minne-

apolis by the amount of the difference between New York to St. Paul and New York to Chicago.

Q. Mr. Bird, you have spoken of a commodity tariff: what is the difference between a commodity tariff and a terminal tariff? A. A terminal tariff, like a state or inter-state distance tariff, is governed by a classification. A shipment of a given article from St. Paul to Aberdeen is put in the same class as other shipments of the same kind of articles from Sioux City or Sioux Falls or Chicago or any other place. A terminal tariff is like a distance tariff, except as to the rates themselves on the various classes. A commodity tariff is a tariff that is made upon a certain article and does not apply to anything else except upon that one article between points named. It is made without reference to the classification. It is a rate upon the article itself, between two specified points. An inter-state or distance tariff may apply anywhere within a district; anywhere within a given distance, but a terminal tariff applies from the terminals named in the tariff. A commodity rate applies on a single article between two given points only; it does not affect the general business in any way whatever.

Q. Is there any business done in the State of South Dakota on commodity tariffs? A. There has been some little business done on a commodity tariff. We made some time ago a rate on corn and hay, from one part of the state to another, to meet an emergency because of the failure of crops. Those rates were recalled. They were between stations in the state. I recall a commodity tariff, on shipments from points in South Dakota to points in other states, on granite paving material. We have rates from Sioux Falls or that vicinity to various cities that are paving their streets. I do not now recall any others; there may be a few others.

Q. You do not recall any others in South Dakota; any other commodity tariffs that touch South Dakota traffic? A. An examination of the list would tell; I do not remember. There are a great many articles in that list.

Cross-Examination by Mr. Null.

Q. Mr. Bird, upon your theory of your Minneapolis terminal tariff being reduced by a reduction of local rates in South Dakota, I understood you to say that the rate from Minneapolis to Aberdeen, for instance, was made up by considering the Minnesota tariff to Big Stone City? A. You misunderstood me, if you did.

Q. Not that the local tariff from Minneapolis to Big Stone City applied, but that in making up your rate from Minneapolis to Aberdeen, the Minnesota schedule had its influence on the rate. A. No, you misunderstood me on that; what I said, or intended to say, was, that the rate from Minneapolis to points in Eastern South Dakota adjacent to Ortonville, were more or less affected by the Minnesota distance tariff, because that tariff governs from Minneapolis to Ortonville, which is on the east bank of the Minnesota river, while Big Stone City is on the west bank in the State of South Dakota. You cannot charge very much more from Minneapolis to Big Stone City than you can from Minneapolis to Ortonville, the rates being advanced gradually or scaled, as we call it, but when we get out as far as Bristol, Andover, Groton or Aberdeen it is different. I referred to the Minnesota tariff, because you had put me on record as to the rate from Minneapolis to Big Stone City, which is a distinct proposition; it stood by itself, and that is the reason I called your attention to the fact that the Minnesota tariff governed in Eastern South Dakota.

Q. Is not it a fact that, while your rate to Big Stone City and Ortonville is 56 cents, the rate to the first station west of there, Milbank, is as high as the inter-state distance tariff? A. Well, if it is not, it is because we did not think it possible to make it so, the aim and intention being that the rates in force in South Dakota, should be on the basis of the inter-state distance tariff for South Dakota.

Q. For the State of South Dakota? A. Yes, sir; that applies betwen the two states, also.

Q. Suppose that freight was consigned from a point 200 miles in the State of Iowa to a point fifty miles in the State of South Dakota, that would take the 250 mile rate under the South Dakota inter-state distance tariff, would it not? A. I doubt it very much: I think not by the present prevailing practice.

Q. Except where there is some other specific rate which would make an exception, the freight charge would be according to the interstate distance tariff for South Dakota, would it not? A. Not necessarily. I think it would not be for the proportion which you specified. You stated 200 miles on one end and 50 miles on the other.

Q. Yes. A. If you would reverse that and make it 50 miles in Iowa and 200 miles in South Dakota, it would come nearer being a representation of the facts, but there is a marked difference between the tariff of Iowa and the tariff of South Dakota, and when you have gone 200 miles on the Iowa distance tariff you have got too much of a spread between the end of that 200 miles and the balance of the 250 miles, and you should scale it so as not to make a violent change from one state into the other. I can only answer you by taking a tariff and going over it carefully with you, to see what could be done.

Q. Let me ask you this question again, Mr. Bird. Not referring to any large cities in Iowa, which might have terminal tariffs in South Dakota, but taking some ordinarily small station, what rate would govern the charges from that point to a point in South Dakota, 200 miles of the shipment being in Iowa and 50 miles in South Dakota? A. Theoretically, the inter-state distance tariff would govern, but as a matter of fact, it might not govern.

Q. How would it be possible to ascertain that rate, if it is not controlled by the inter-state distance tariff and there was no terminal tariff in force between those stations? A. There would be a terminal tariff from some station in force, however. I can answer you if you will permit me to make an illustration.

Q. I want you to get at it so we will understand it thoroughly. A. You will observe the boundary line between Iowa and South Dakota is the Big Sioux river, and that our company has a line running from Elk Point, a short distance west of Sioux City, northwardly to Sioux Falls Junction and that it follows the valley of the Sioux river all the way, crossing the river in a great many places, ten or eleven times, I think.

For a long time (a period of years) being advised by counsel, we applied the inter-state distance tariff to all traffic between Sioux City and points on the Elk Point and Sioux Falls Junction line north of McCook, (that is where we cross over into South Dakota the first time, going out of Sioux City, westerly) because we held that line to be an inter-state line and subject to inter-state rates. But, in a later time, within a few years, counsel advised us that owing to some decision of the court, that traffic, we will say, between Beloit, Iowa, and Sioux City, was subject to Iowa state rates,

even though in reaching the destination the train passed out of the state and then back again, so that the principal traffic between Sioux City and points on the division as far north as Beloit, has been made subject to the Iowa tariffs. I do not remember the distance from Sioux City to Beloit, but if we go from Sioux City to Worthing, which is about the first or second station west of the Dakota line—theoretically the rate would be based on the inter-state tariff, because that is clearly applicable to inter-state business, but the road from Sioux City to Beloit being an Iowa road, subject to Iowa schedules, you could not jump your rates to points beyond Beloit, to Worthing, so as to make a consistent tariff. You would have to scale that so as to make the advance from one state into another reasonable, and moderate, and not do violence to the tariff. The rates must be scaled. Theoretically, the inter-state tariff would govern, but as a matter of fact, it would be impossible to apply it.

Q. If in shipping for a distance of 200 miles in Iowa and 50 miles in South Dakota, you applied the full inter-state tariff to it, it would exceed the sum of the two local rates, would it not; it would be quite liable to? A. I do not think it would.

Q. That is, apply the local rate of Iowa for the 200 miles and then the local rate in South Dakota for the other 50 miles? A. I am unable to believe that the combined locals would be less than the inter-state rate; but that is a matter that can be definitely ascertained by taking the tariffs and testing them. I would like to do it, if you will permit me.

Q. Yes. A. All properly constructed tariffs, whether prepared by the carriers or by the commissioners of the various states, or by the legislature, are scaled so that the rate, per ton per mile, decreases as the distance increases, that is to

a reasonable limit. There is so great a difference between the charge of any tariff, no matter how low, for a haul of 200 miles and the same tariff for two hauls of 100 miles each, that the results, which you questioned me about, could hardly obtain There is so much difference between a continuous haul of 200 or 400 miles and hauls of half that distance, that you can hardly realize it. The rate of Iowa for 200 miles plus the Dakota rate for 50 miles, would not be lower than the inter-state distance rate for the entire haul of 250 miles.

Q. The fact that the schedule adopted by the commission only applies to a haul of 400 miles and less, would that exempt your terminal tariffs from the effect of a reduction where the haul is for a distance of 600 miles, as from Chicago? A. I do not think it would exempt it by any possible means.

Q. How could it effect it? A. I do not believe it would be possible for my railroad to maintain a higher basis of rates in the State of Minnesota, for local state business, or inter-state rates from Minnesota into Dakota, than the rates applying locally in South Dakota.

Q. But you think it is possible, theoretically, at least it is probable, that any shipments from Iowa or Minnesota into South Dakota, you are enabled to charge the inter-state distance tariff, notwithstanding the much lower rates prevailing in Iowa. A. Very true, but in that case the inter-state tariff is not higher than the tariff of one or the other of the states, between which the business is exchanged. If the Dakota rates are reduced, then the local rate would be lower than the inter-state rate.

Q. So that, you insist that a reduction in South Dakota would affect it, because the maximum rates in South Dakota are higher than the maximum rates either in Iowa or Minne-

sota? A. Partly so, but especially because it is not in the nature of the case that we could maintain a higher scale of rates in Minnesota than we do in South Dakota. It is an absolute impossibility and speaking with proper respect, it would be an absurdity, to attempt to enforce a higher scale of rates in Minnesota than in South Dakota, and we would not be permitted to, unless the courts intervened and stopped further reductions.

Q. Now, Mr. Bird, would a reduction then of the rates in South Dakota to a point where they might be said to be level with the rates of Minnesota have the effect which you have been talking about? A. Yes, sir; the rates from terminal tariff points—from Minnesota points to principal points in South Dakota, I mean the rates which apply to the principal proportion of the business, are higher than the rates provided in the local Minnesota scale.

Q. So, then, the practical effect of the tariff, as it now stands is, that a shipment from Minneapolis to Aberdeen, the earnings of which are divided upon a mileage basis— A. I beg pardon, there is no division.

Q. —would yield more revenue to the Minnesota line per mile than would be realized by the Minnesota line, if the consignment was only as far as Ortonville? A. I do not understand that question. I do not understand that there is any division of rates; absolutely there is none, but outside of that I do not quite understand the question.

Q. I understand you to say that the rates in Minnesota are somewhat lower than they are in South Dakota? A. Quite a little lower; yes, sir.

Q. And I understand you to say that that rate applies between Minneapolis and Ortonville? A. Yes, sir; it does.

Q. And I understand you to say that when you cross the line into South Dakota and far enough to enable you to scale the rate up to the inter-state distance tariff, you do so? A. Yes, sir; that is right; that is quite right.

Q. Consequently South Dakota pays more proportionately for hauling her goods over the Minnesota mileage than the people of Minnesota pay for the same service? A. No, South Dakota does not pay anything; there is no division of this rate at all, nothing of that kind. It is a mere comparison of the rate from Milbank to Minneapolis with the rate from Ortonville to Minneapolis. I suppose that the rates on the inter-state tariff—in fact, I know the rates on the inter-state distance tariff, are higher per ton per mile than the rates of the Minnesota tariff. That is all there is to it.

Q. Mr. Bird, is it not a fact that the local rates in South Dakota, for a short distance, is so high upon farm machinery for instance, that large quantities of it are distributed from Mitchell by team rather than by freight? A. It is not a fact within my knowledge; it is not a fact that has ever been alleged to me before. There must be a large distribution of that class of freight by teams from various stations on our road in South Dakota, but away from the road. Mitchell, South Dakota, must be a place at which a great deal of freight is delivered to teams for the completion of the haul overland, but I do not know and I have never been advised of any hauling of merchandise from Mitchell to other stations on our road by teams. It may be, but I do not know about it.

Mr. Kittredge: It is admitted by the parties to this suit that the population, per mile of railway, in each of the eight states penetrated by the Chicago, Milwaukee and St. Paul Railroad, was on June 30, 1896, as follows:

Missouri,	454	Iowa,	252
Illinois,	399	Minnesota,	237
Wisconsin,	306	South Dakota,	131
Michigan,	300	North Dakota,	81

Whereupon the further taking of testimony in this cause was hereupon adjourned to Friday, January 28, 1898, to be continued at the same place, at the hour of 10 o'clock a. m., of said day.

January 28, 1896, 10 o'clock a. m.

The further taking of complainant's testimony was adjourned until 2 p. m. this day.

January 28, 1898, 2 p. m.

D. J. WHITTEMORE, being called as a witness on behalf of the complainants, having been first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Whittemore, what position do you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. That of chief engineer.

Q. How long have you held that position? A. Since the organization of the company in 1863.

Q. As chief engineer of the company, what are your duties? A. I do the necessary engineering in the construction. The maintenance of the railway comprising the system of the Chicago, Milwaukee and St. Paul Railway Company, repairs and renewnls, construction, and planning the work.

Q. Have you entire charge or have you charge of all the

work pertaining to the engineering department of the Chicago, Milwaukee and St. Paul Railway Company? A. I have general charge of the engineering department. I wish to say that for the last ten years or more, since the Dakota lines were constructed, it was found, owing to the volume of work coming in, necessary to establish a new department called the department of bridges, whose specific duty is to draft the plans and supervise the construction of buildings and bridges, the work so done is to receive my approval. The work so done by this department, even the plans, have to receive the approval of the chief engineer.

Q. Who is in charge of that department? A. Mr. Onward Bates.

Q. At what age did you enter the railway service? A. At the age is 17.

Q. And in what capacity were you employed at that time? A. Rear chainman.

Q. In what company's service were you employed at that time? A. The Vermont and Canada.

Q. How long did you serve in the capacity of chainman and similar duties? A. In the winter of 1847, and when I was nineteen years old, I was appointed assistant engineer in charge of fourteen miles of construction between Swanton, Vermont, and Rouse Point. We had a bridge crossing the two arms of Lake Champlain, one of which was 4,200 feet long, and the other 5,800 feet long. In the latter we constructed the first railway pontoon bridge in this country or in any other.

Q. Well, after that what services were you engaged in? A. I was then appointed as assistant engineer on the Great Western Railway in Canada, and remained there until 1852'

between '51 and '52, I think; about the latter part of '51; then I was called to Ohio where my father was engaged in the railway business, construction of railways, and the day after my arrival he was killed. I was very severly injured, but recovered, and I acted from then until July, '53, as contractor's engineer on the Central Ohio road, now a part of the Baltimore and Ohio system. In July, 1853, I came to the La Crosse and Milwaukee Railroad, and was there employed as assistant engineer, which road now forms a part of the St. Paul system.

Q. How long did you remain assistant engineer of the La Crosse and Milwaukee Railway Company? A. Until 1857, when I was appointed chief engineer of the Southern Minnesota Land Grant Railway, and served as such between 1857 and 1859; I think that was about the time. I located upwards of 250 miles of the Land Grant Railway of that state, and I think supervised some sixty or seventy miles of grade. Work was arrested at that time, and I went to Cuba, having accepted an offer as engineer for the Ferro Caril del Oeste, or in English, Western Railway.

Q. Ferro Caril del Oeste, or Western Railroad? A. Yes, sir.

Q. When was that? A. That was in 1860, I remained there only about six months, when I saw the war was about breaking out in this country. I had a pretty good indication that war was coming from the fact that I saw Col. Colt selling arms to the confederates in New Orleans. I returned to the United States and went to Washington, seeking some position in the army. An uncle of mine, then senator, advised me that he had upwards of 450 applications for the rank of 2d lieutenant, that the war would be over in a few weeks, and I had better go and follow my profession.

At this time I received a letter from the then manager of the La Crosse and Milwaukee road, offering me a position as assistant engineer. I accepted, went there and remained as assistant engineer on the La Crosse and Milwaukee until it was finally merged in the Chicago ,Milwaukee and St Paul Railway system, and then I was appointed chief engineer of the Chicago, Milwaukee and St. Paul Railway in 1863.

Q. Have you been chief engineer ever since, and have you acted as such? A. Yes, sir.

Q. Mr. Whittemore, are you a member of the American Society of Civil Engineers? A. I am.

Q. That is an organization of the leading civil engineers of the United States, is it not? A. Of the American continents.

Q. Have you held any official position in that organization? A. Yes, sir; I was president about the year 1884, I believe.

Q. Were the lines of the Chicago, Milwaukee and St. Paul Railway Company in South Dakota built under your supervision as chief engineer? A. Yes, sir; well, I wish to say except those lines which were purchased by our company—certain lines were purchased by our company.

Q. Certain lines were purchased by our company? A. Yes, sir.

Q. As to all the lines that were constructed by our company you were chief engineer and in charge of the construction; A. Yes, sir.

Q. Have you made careful estimate of the original cost of the South Dakota line? A. I have.

Q. In what manner have you computed the original cost

of the South Dakota line? A. From data in my office, from the price paid at the time for work and materials as ascertained from the auditor's books and from my own record and from my remembrance of the whole work, collectively taken together.

Q. What is the mileage, according to your figures, of the South Dakota line? A. The record in my office shows that the mileage of main track in South Dakota is 1,101.06 miles of main track, and of side-track owned solely by our company, 86.17, and the side track to the Western Portland Cement Company Works in which our company has an interest of 5.31 miles, extending from Yankton to the Western Portland Cement Works.

Q. In which our company has a half interest? A. Yes, sir, it is so stated in our records, as belonging to our system. I mean not belonging to, but as a part of our system.

Q. And have you included the cost of that line in your figures? A. I have not.

Q. Now, Mr. Whittemore, when a railroad is to be constructed, where are the elements of expenses that must be considered by the engineer and by the manager of the company. A. First will be the cost of survey, preliminary and location surveys and all depend nt upon them. making necessary explorations and reconnoisance of the country adjacent and beyond the line. What I mean by beyond the line is to know how and where we terminate, so we will not find ourselves in a cul de sac—in a place we cannot get out of or extend from. I am speaking of the western country in particular. If we are directed to make a location between Philadelphia and Baltimore, we know those are the places where we are to commence and where we are to terminate. If we make a survey to reach the Missouri river, we have

got to first ascertain from the surface levels the practicability of routes. We make preliminary surveys on both sides, and beyond, to see how the railway can be extended, and try to pick out points from which the lines can be extended. All of these enter into the item of engineering expense. In the course of the construction, we note the soil, climate, expense of getting material to these parts, and from what sources we shall draw in building the line. Everything that goes into the construction of a railway must be considered by the engineer.

Q. Prior to entering upon the actual construction, these preliminary surveys and instrumental work cover considerable time, and considerable expense, I presume? A. Yes, sir; not only that, but while during the construction which you project from the east to the west, you frequently discover some reason for changing what you have already forecasted as to proper location. A notable instance we have in Dakota. Before we knew whether we could get out of Chamberlain, a line was projected from there to Niobrara. It was suggested a line should be built into Niobrara, and we commenced to build that line, as indications showed we could get out of the Niobrara Valley in that way. Then explorations were started west from Chamberlain. We carried our explorations and surveys through from Chamberlain across the great Sioux reservation into Wyoming. We made the survey from Chamberlain west across the reservation, under very great difficulties. When we started first to make that location, we were driven back by the Indians, who wanted to be pacified; Spotted Tail was there at that time, and he wanted to be pacified, and in order to pacify him we had to hire thirty of his Indians and his son as guides to the party, and that survey was carried through to Rapid City and even beyond that point, into Wyoming beyond Deadwood. And

not only that was done—perhaps it does not enter into this question—but ninety miles of the right of way was secured, and 640 acres at Brule Agency was bought and paid for by the company. I can say almost generally of every direction we went, we made surveys beyond those points of present terminals. We located lines to Bismark—purchased ground at Bismark—and we located a line entirely across the Sisseton Reservation.

Q. Are surveys beyond and on both sides of the line as it is finally located necessary to enable the engineer to select the best and most favorable route? A. Quite necessary.

Q. And it is in the invariable and customary practice of engineers in locating a line of railway in a new country to make exploration surveys, surveys such as you have described? A. Yes, sir. I would qualify that by saying good engineers, competent engineers.

Q. And in the economical construction of the railway, the preliminary exploration surveys are really more economical than to blindly go ahead and locate the line without them. Is not that so? A. Of course it is or we would not make them.

Q. Have you prepared a statement of the cost of the South Dakota line of the Chicago, Milwaukee and St. Paul Railroad system? A. I have prepared such a statement.

Q. Will you produce it?

Statement here produced by the witness.

Mr. Peck: On this statement the first item is earthwork, 12,442,000 cubic yards of earthwork, at 15.16 cents per cubic yard, amounting to $1,886,207; is that a correct statement of the cost of earthwork on the South Dakota line, to the best of your knowledge and belief?

Q. That is what is called the grading? A. Excavation of earth and grading. That word "earthwork" should not have been there, as some rock is included in the item. There is very little rock anywhere in that country; it does not amount to enough for us to put in a separate item of it. There is a very little in and around Mitchell and Parker, sand rock, you might call it.

Q. 5,000 cubic yards of rip-rap at $1.50 a yard, $7,500. A. That is an estimate and is as near as I can give.

Q. It is your honest estimate of the amount of rip-rap that was put in? A. Yes, sir; at least that amount.

Q. 11,011,000 bridge material timber— A. Feet, board measure, timber.

Q. —in bridges and culverts, including the cost of the erection of them at $30 per thousand, $33,330; is that a correct statement of the cost of that item of the work of construction? A. Yes, sir; I believe it is correct. You must bear in mind Mr. Peck, that I ascertained on about 900 miles of road, what material was used, and I applied that too the 1,100 miles—200 miles that I do not know what was used, only from looking at the profiles—that it bears the same ratio.

Q. The 200 miles that you speak of being the 200 miles of road purchased by this company after or while it was in process of construction? A. Yes; and of which we have no record of the quantity of material used but by looking over the profile carefully, I think that it would require about the same quantity for about 200 miles additional, which we did not construct, per mile, as for the 900 miles which we did construct.

Q. But of the 900 miles, you speak of personal knowledge? A. From the minutes I have in my office.

Q. 467,600 lineal feet of piles in bridges at 35 cents, $163,660, is that item correct, to the best of your knowledge and belief? A. It is to the best of my knowledge and belief, a very close approximation.

Q. Eight truss bridges, $35,495; is that correct? A. That is what I believe to be correct.

Q. 286 iron pipe culverts in place of wooden ones, betterment, at $50 each, $14,300? A. Yes, sir; that is about the only case of betterment which you will find in this estimate. I have particulars specified.

Q. Is that item correct? A. It is correct.

Q. 106,300 tons of rails, average cost $46.76, $4,970,627; is that correct? A. I believe it is. Shall I state how I arrived at that?

Q. You may, if you choose. A. I took the miles built certain years. I took the average price of rails paid during that year and multiplied the price paid each year by the tons used each year and when the aggregate was ascertained divided it by the number of tons, which gave $46.76 as the average price paid.

Q. 8,310,600 track spikes, at 2½ cents each, $207,665; is that item correct? A. That item is approximated according to the number of spikes we use to the mile.

Q. And the number of miles? A. And the number of miles.

Q. And the cost price of the spikes? Is the price that was paid during those years of construction, 418,000 pairs of rail-joint splices complete, $1 apiece, $418,000; is that item correct? A. That item is correct according to my best belief, that is to say, it is hardly enough, but I wish to say further that there are different kinds of splices running from

thirty-six to seventy-five pounds to the splice and I have taken the average at forty pounds at 2½ cents a pound as the price paid, but I am afraid that is a little too low. But I have put it in at forty pounds at 2½ cents per pound, $1 apiece.

Q. 3,562,000 cross-ties at 30 cents, $1,068,600? A. That is the average price paid per cross-tie during those years.

Q. Without freight? A. No, sir; no freight; the freight is to be added.

Q. The freight is not included? A. No, sir.

Q. 690 switches complete, at $100 each, $69,000? A. That was the prices that were used at that time in all our work as being the cost of switches complete.

Q. Ten railroad crossings, $200 each; $200,000; is that a correct statement? A. Yes, sir; it is correct.

Q. That is crossings of our railroad with other roads? A. Yes, sir; and some crossings, I believe, of our own road with itself.

Q. 1,187.21 miles of track laid and surfaced, $450 per mile, $534,244? A. That is estimated as being a proper expense for that work at that time, and even it would be to-day.

Q. On what basis did you estimate it; how did you reach that sum as the cost of laying and surfacing the road? A. I combined two items there, the cost of laying and the cost of surfacing, and it was about the price paid for a similar class of work when it was constructed and it represents, as I believe, the actual cost of doing such work.

Q. 267 miles of track ballast at $500 per mile, $133,500? A. That is estimated, the price per mile, 267 miles of track ballast. I get that item from the road department by a communication I had from them that that amount of ballasting

has been done and considering the nature of the ballasting, it is put in at $500 per mile. That goes a very little ways toward making a perfectly ballasted road. The ballasting where we fully ballast, costs from $1,500 to $2,500 to the mile, but it is not that kind of ballast.

Q. 1,101 miles of track, the material for which was moved to the front from the nearest point of distribution, cost per mile, $140, total $154,140; is that a correct item? A. Yes, sir; I believe it is; shall I explain how that is?

Q. If you can? A. In delivering material from a long-distance, it is necessary to have a distributing point or place where you deposit your material. You cannot depend on shipping iron from Chicago or from Pennsylvania to where the work is in progress and have it arrive as you want it in laying your track, and you make a place of deposit or storage—

Q. A depot? A. A depot of it, ties and iron, and from that point as the track is produced, you have an engine and equipment to move it to the front from this general store place and that consists, of say, thirty-six cars and two engines and a caboose and you lay on an average about half a mile of track per day. You can lay from two to three miles a day, but it is not done economically. If you are practicing economy as we were compelled to, you will complete about half a mile a day and these two engines, thirty-six cars and the caboose amounts to $70 a day, $25 each for the engine, and 50 cents a day is a low price which the company charges itself for the use of the flat cars, that would be $18, and $2 per day for the caboose, which makes $70 per day, and it takes two days to complete a mile, which makes $140 per mile for that service of moving material, to the front, ties and iron.

Q. 505 miles of right of way fenced, $280 per mile, $141,400? A. I get that 500 miles right of way fence from the general superintendent informing me what road is not fenced, and I take the price of the fencing—

Q. 32,000 panels of show fence, making 100 miles, at $2.10 per panel, $67,200? A. I get that from the general road-master's estimate of snow fence that we have, and it costs $2.10 per panel.

Q. Total amount, $67,200? A. Yes, sir.

Q. 288,000 feet, board measure, crossing plank, for 1,200 crossings, at $20 a thousand, $5,760; is that a correct item? A. I believe it is.

Q. 1,000 cattle guards, estimated at $10 for each cattle guard, $10,000; is that a correct item? A. I believe that is correct estimate. We have 500 highway crossings and I put that in as certainly that much.

Q. Freight on track material, ¾ of a cent per ton per mile, $2,342,323? A. Yes, sir.

Q. Is that a correct item? A. I believe it is.

Q. That is, ¾ of a cent per ton per mile was the price which your company charged at that time as the actual cost of performing that service? A. Yes, sir.

Q. That was not a tariff rate? A. No.

Q. It was what you estimate as the amount it really cost the actual cost to the company of moving that material? A. Yes, sir.

Q. Freight on bridge and culvert material, at ¾ of a cent per ton per mile, $108,862; is that a correct item? A. I believe it is.

Q. Freight on track tools and supplies, ¾ of a cent per ton per mile, $8,250? A. Yes, sir.

Q. Freight on contractors' teams to the work at ¾ of a cent per ton per mile, $6,600? A. Yes, sir.

Q. 6,600 men transported to the work at 2 cents per mile, $66,000; are all those items correct to the best of your knowledge and belief? A. I believe so.

Q. 256 station sign boards at $6, $1,596? A. Yes, sir; that is correct.

Q. 1,200 highway sign boards at $5 each, $6,000; forty railroad crossing sign boards at $6 each, $240; is that correct? A. Yes, sir; that is correct.

Q. Forty railroad crossing "stop boards" at $6 each, $240, 2,000 whistling posts at $1 each, $2,000; is that correct? A. Yes, sir; that is correct.

Q. 510 mile posts at $1 each, $510; 1,100 rail rests at $1, $1,100; total, $11,626, are those items correct? A. I believe they are to the best of my knowledge and belief.

Q. Cost of building included, shops, freight and passenger stations, coal sheds, tool houses, stock yards and water stations, as per estimate of bridge and building department $940,606? A. That I take from the bridge and building department statement rendered to me by them. I suppose you will call on them for that.

Mr. Peck: Yes; if there is any question about it.

The Witness: It was made under the supervision of Mr. Bates, the engineer of bridges and buildings, and he is more familiar with them than I am.

Q. Cost of right of way and station grounds, 1,101 miles at $128 per mile, $140,928; is that a correct item? A. I am afraid that is too low. When I made this out I got from the secretary of our company what his papers showed had been paid by our company for right of way and divided that by

the 1,101 miles which produced this amount of $128 per mile. I neglected to think of what might have been paid and I do not know and I have not any evidence on this 180 or 200 miles of line we acquired. I have no knowledge of that but I have knowledge in the way I have told you of this $128 per mile; but I do not know what should be put in for the right of way of what you call the Dakota Southern; you know they are lines that were acquired by our company.

Q. Cost of telegraph lines, instruments and tools owned by the Chicago, Milwaukee and St. Paul Railway Company, $40,626; is that item correct? A. Yes, sir; that is correct.

Q. It does not include anything owned jointly by the Chicago, Milwaukee and St. Paul Railway Company with the Western Union Telegraph Company? A. No, sir.

Q. It is our own ownership? A. Yes, sir.

Q. One-half of the cost of the telegraph lines, instruments and tools owned by the Chicago, Milwaukee and St. Paul Railway Company and the Western Union Telegraph Company, $30,656; is that correct? A. Yes, sir.

Q. Engineer, superintendent and local and general office expenses, estimated at $300 per mile of main track, $330,300; is that correct? A. Yes, sir; I believe that to be correct.

Q. Add interest on the cost as above given for one-half time during which the line was under construction, one year at six per cent., $854,790; is that a correct item? A. I believe it is.

Q. Track tools, 125 sections at $138 each, $17,250; is that correct? A. Yes, sir; I believe it is.

Q. Station furniture and supplies, ninety-four stations, at $78 each, $7,332; is that correct: A. Yes, sir.

Q. For betterment of roadbed and bridges and so forth,

estimate five per cent. of the above, $756,294; is that correct? A. According to my experience, I believe that to be a close approximation. I wish to call your attention to the matter I have above mentioned for betterment to culverts; this item here does not inclued that.

Q. Now, you make the total, estimate and cost of lines in South Dakota, exclusive of betterment, of equipment shop plants outside of the state and stock of material, the sum of $15,882,171. A. Yes, sir.

Q. That is the aggregate of all these items? A. Yes, sir; of those items above.

Q. And is that correct? A. Yes, sir.

Q. Making a total cost per mile of main track, exclusive of equipment, shop plants outside of state and stock of material, $14,425? A. Yes, sir,

Q. And is that a correct statement? A. I believe that to be correct; I believe that to be at least the cost.

Q. You say that you believe that it is at least that much? A. Yes, sir.

Q. Do you mean that the statement that the amount, $14,425 per mile, exclusive of equipment and shop plant and stock of material is a conservative statement of what that cost was? A. As I now look at it I believe it to be very conservative.

Q. I will also ask you if your estimates, your figures, whether actual or estimated, that you have included in this statement, you have endeavored in all cases to make them fair, just and conservative estimates of the different items? A. That has been my effort.

Q. I notice you have an item here for permanent supplies and materials that are necessarily kept in store and with-

out which a railway could not be successfully operated, $300 per mile; is that a correct statement? A. I believe it is a very close approximation of the amount that is necessary to have on had before we can successfully operate a railway

Q. Total equipment per mile exclusive of equipment and shop plants outside of the state, $14,725? A. Per mile.

Q. Per mile; the cost of equipment and the shop plant mentioned in this statement are not in your department, are they? A. No, sir; the shop plants are not in my department; they pertain particularly to the department of bridges and buildings.

Q. And the equipment pertaining to the operating department? A. I act only in any advisory capacity in regard to shop plants and the like of that.

Whereupon the further taking of testimony in this cause was hereupon adjourned to Saturday, January 29, 1898, to be continued at the same place at the hour of 10 o'clock a. m. of said day.

January 29th, 1898, 10 a. m.

D. J. WHITTEMORE resumed the stand, and was further examined in chief by Mr. Peck as follows:

Q. Mr. Whittemore, in your testimony yesterday you mentioned many preliminary surveys that you were required to have made in advance of the lines and on the sides of the lines in order to enable you to determine exactly where the permanent line should be located. I will ask you to state whether in the figures you have produced estimated in the cost of those lines, you include any of the expenses of those surveys, outside that you mentioned? A. The expenses

of the outside surveys are not included in my estimate. It includes the location and preliminary surveys immediately on the line of construction.

Cross-Examination by Mr. Null.

Q. The first item upon your statement is a certain number of cubic yards of earth-work. Is that an estimate, or is it the actual result from the construction of the road? A. I will answer that by telling you how I arrived at it. I took 904½ miles of road, the quantity in that, as paid to the contractors for doing it. The actual amount we paid the contractors for doing it. I divided that by 904½ miles getting in that way approximately to the yards per mile. That gave me 11,295 yards per mile. In that 904½ miles I included in some twenty miles of North Dakota line. That was a little lighter than the average, therefore I call the amount in my estimate 11,300 cubic yards per mile, five yards per mile more than the average. Then I applied that as the quantity per mile that would be on 1,101.06 miles, not having the original estimate of quantity paid for on those lines that were purchased by our own company.

Q. Now, this, you say, was an average of about 11,300 yards? A. Yes, sir.

Q. Per mile? A. Per mile.

Q. Now, in that estimate—now is that estimated upon the basis of the number of cubic yards in both cut and fill? A. Always the cutting is hauled in the filling. It is not measure in the cut. It is measured in the fill.

Q. So, the number of cubic yards contained in your statement, then, is the number contained in the fill? A. Approximately contained in the fill. Except in cases where the haul was so long there was waste material.

Q. What is the rule as to the length of cut to fill? A. I think our rule was 1,000 feet or 1,500 feet, I cannot tell which.

Q. The price paid to contractors varies somewhat, does it not? A. It varies. I took of twenty different pieces of work let to contractors, and carried out what we paid them in money; then I divided the total amount paid in money, for this work by the number of yards, and it gives me that price of 15.16 cents.

Q. Can you tell me from the statement which you have there, the highest and lowest price paid contractors? A. No, sir; I cannot. It varies from 13½ cents, as I recollect it, to 20 cents.

Q. This work of grading was all done by contract, was it? A. It was all done by contract, yes, sir. That is, the amount of 11,300, I cannot say what was paid for that 200 miles, not built by one company, but this 900 miles was all done by contract.

Q. The next item of importance is the timber in bridges and culverts? A. Yes, sir.

Q. You estimate that they cost $30 a foot? A. Yes, sir, per 1,000 feet board measure.

Q. And that includes the cost of the material and the construction? A. And the labor in material and labor, not including transportation.

Q. Have you a statement showing the length of the bridges? A. I have a statement that showed the present length of the bridges. We have an iron bridge, two span length, 124 feet, this is what we call a girder bridge.

Q. That has not reference to timber bridges? A. We have now 685 pile bridges, aggregating 50,920 feet in length, at the present time.

Q. What is the length of the longest wooden bridge? A. A pile bridge?

Q. Yes, or timber bridge? A. I could not tell you.

Q. You simply had the aggregate? A. Yes, sir.

Q. Now, I suppose that those timber bridges cost about the same per foot with reference to the length? A. It depends on what material is used, in some the earlier bridges, pine piles were used, and on the later bridges oak piles were used, and the cost was materially greater.

Q What basis is this estimated on? A I took the average price as near as I could ascertain, that was paid for the different kinds of materials that enter into the bridge.

Q This first item of 11,000,000 feet, that I suppose, was sawed timber? A Yes, sir

Q. It does not include any piles or anything of that kind? A That is sawed timber, dimension timber

Q. Does that estimate on timber and bridges include the ties? A. I believe it does not. It does not include the ties, I know it does not. We furnished the ties and had them laid

Q. You do not use the ordinary ties in the bridge? A No, sir

Q You used square ties? A. Yes sir

Q. Can you give us the length of the eight iron truss bridges? A. We have one iron bridge, two spans, 120 feet over all, that is the two spans aggregated 124 feet, and seven ordinary bridges, that is, seven span lengths, 935 feet of iron trestle, length 184 feet, aggregating 1,243 feet

Q That is—those are the eight truss bridges you have indicated in your statement? A. Yes, sir; the eight truss

bridges, I think, eight truss bridges, yes, sir. Now, I want to show you how we arrive at the number of feet of board measure, which is by a similar process to which we arrive at the cubic yards per mile. We arrive at it in the same way; that is to say, we find that the aggregate is very close to 10,000 feet board measure in bridges and culvert to the mile, and the piling in bridges at 425 lineal feet per mile of road These figures in average quantity used in a mile estimated on 880 miles I take 880 miles time instead of 904, because my figures give me—this is the average used on 880 miles—the prices stated are the average paid for timber and piling in place in the structure as originally completed, that of the truss engine I have it stated $35,495, you will observe for the eight bridges, that cost is made up in this manner James River Division bridge $1,675; bridge on the I. and D Division near Canton and inter-state bridge, 148 feet Howe truss, including the abutments, I put at $2 960 or $40 a foot Then I & D. Division near Mitchell, 128 feet Howe truss, at $40 a foot, $5,520 Bridge on I & D. Division at Hudson, an inter-state bridge, 138 feet Howe truss, at the same price at one-half the cost, $2,760; then at Tuscan, the bridge, 138 feet long Howe truss at $40 per foot, $5,520. When I say at $40 a foot I mean that includes the abutments on which it rests. Sioux Falls, near Hudson, 148 foot, Howe truss bridge, one-half in South Dakota, $2,960. That is a little longer bridge than the others.

Q. It is on the Sioux? A. I think that must be on the Sioux . Then the Sioux City Division at Sioux Falls, 158 foot, Howe truss bridge, I put that at $50 per foot, because it is a longer bridge and more expensive, including abutments, $79,000. The Sioux City Division at Dell Rapids two iron spans, sixty-two feet each, twenty-four feet at $50 per foot, $6,200, aggregating $35,495.

Q. Now, can you give the aggregate length of the eight bridges? A. The aggregate length of those bridges is 1,243 feet, these truss bridges.

Q. The next item that I call your attention to is item of rails. What weight of rails did you figure on? A. Fifty-six pounds per yard for original construction.

Q. And was that an iron or steel rail? A. Part of it was steel and part of it iron, between four and five hundred miles was steel.

Q. 8,000,000 pounds of track spike? A. That is estimated.

Q. How much do you estimate to the mile? A. Now, this is according to the information, some information, I got from our general roadmaster. The cost of rail is computed by multiplying the amount laid each year on the original construction by the price paid for rails that year according to information I obtained in the general auditor's office. The amount of track spike is computed at the rate of 7,000 pounds per mile. The price given is an average price for spikes during the year of construction as estimated by the records in the chief engineer's office.

Q. Is 7,000 pounds to the mile based upon your experience in construction? A. Yes, sir.

Q. Or is it what you were informed was used? A. No, sir; it is an easy calculation.

Q. It is an estimate? A. Yes, sir.

Q. I notice that you estimate the average cost of these rails at $46.76 a ton? A. Yes, sir.

Q. Do you know what the present market is? A. No, sir. I do not know. It has been all the way from $18 to $25 in the last few months.

Q. And steel could have been had as low as $18 in the last year? A. Yes, sir.

Q. And it is a fact, is it not, that work has been done in the last year at $20? A. Rails?

Q. Yes, sir? A. Yes, sir; it is a fact.

Q. Do you know what the present market is for spikes? A. I do not know.

Q. It is not 2½ at present? A. No, sir.

Q. What would be your idea of the market at the present time? A. I would rather not answer that question. I do not like to answer a question like that where it is easily ascertained.

Q. 418,000 pairs of rail joints splices. Explain what constitutes a rail joint splice? A. They consist of two leaves and eight six or four bolts with their nuts, they bolt them together. In some places there are six bolts, and in other places four bolts in a splice.

Q. There are 352 splices to the mile? A. Yes, sir.

Q. What is the average weight of these splices? A. The average weight of the splices is something it is hard to estimate, they vary from that line on probably thirty-seven pounds to seventy-five pounds, according to the different weigh of rail. Different forms of rails, weight of rails, and different dimensions of the splices. As a conservative estimate I have called these splices forty pounds.

Q. And figured them at 2½ cents a pound? A. Yes, sir.

Q. Do you know what the market value of that material is at the present time? A. I do not.

Q. It is not as much as 2½, is it? A. I presume not, sir.

Q. The number of ties, is that actual or is that estimated

according to the piles of road? A. The number is quite accurate; that is to say, we know there are seventeen ties, if they are uniform in size, which go in the length of a rail, and that multiplied by the number of rails that constitute a mile, makes 2,992, and sometimes if the ties are small, more are put in, and we estimate at 3,000, and it is a figure we use universally in determining the ties in a mile.

Q. 690 switches? A. I think those were mostly the Whittemore switch, at that time. It was a switch invented by myself, but I gave the switch to the railway company. The switches were manufactured by the company, and I had no interest in them whatever.

Q. That was your construction? A. Yes, sir; I think so

Q. Now, those you have figured at $100 each? A. Yes, sir.

Q. Is the computation upon the switches fixed accurately; is it so much a switch? Does is sell by the piece? A. I put the various items together, what it approximates together. In putting in a switch, some labor is required over and above ordinary track laying. In putting in one at $100 —I have frequently estimated it at $137 a switch I kn at that time that the estimate I was making of the cost of the switch would vary from $100 to $137, varying a little according to the angle of the switch, and to be on the safe side. on the conservative side, that is the side I intend to be on; I put them in at $100.

Q. I understood you for track laying and surfacing, you estimated at $450 per mile? A. Yes, sir.

Q. I understood you to say that with certain crew and facilities for track-laying, which you described in your testimony, they might lay a mile or a mile and a half a day? A. I wish to explain to you what that means, laying a mile or a

mile and a half of track a day, and as high as seven miles of track have been laid, in a day, but it was just spiking the joints and centers, and putting in a portion of the bolts in the splices, and no surfacing. You have got to use the balance of this money to complete it, and besides that it is more expensive, because you are hauling the material at great disadvantage. I have taken it as though this work was done in an economical way. That rapid kind of track laying costs almost double the price.

Q. Did you contemplate in that estimate the use of a modern appliance in handling rails and laying the tracks? A. Some of the later methods show some economy. It was laid with the usual appliance at this time.

Q. You did not at that time have these modern appliances? A. No, sir. That would affect the cost of laying a small amount, if it was possible to use them. If you are rushing the work, you could not use those.

Q. Let me ask you if it is not a fact that at the present time in the track work, this labor of surfacing and track laying is usually figured at $300 a mile? A. It was at that time, but it does not comprise what I have comprised in my estimate. I wish to explain the manner of track laying. In the first place, suppose you have a contractor doing this work at say $300 a mile, or whatever it is; you run the material out to him, which I have put in here at $140 a mile the cost of moving the material. He will get that and perhaps drop the surfacing, I do not know of any track laying or surfacing at $300 a mile. He leaves it and goes off, he is moving ahead, and the company has to keep that track intact, in order to keep materials moving ahead. If he does the surfacing, he shovels from the side of the rack, shovels the earth from the side of the track and by that means leaves sort of a slack shoulder there. He has done this part of the

work, but the track in the rear of him has to be maintained for the operation in moving materials ahead. Immediately behind the contractor, after he has left his work, the company has to put on a gang of men, who take the place of section men, put them on and keep them on there. That is paid for and may cost $100 a mile or more, and shoving material ahead $140. That charge I state in here is intended to be a conservative estimate to cover all these expenses.

Q. That, you say, you figure at $140 a mile? A. No, sir.

Q. That was the delivery of the material? A. Shoving material ahead from our store.

Q. But what proportion of the $450 would that constitute? A. What would it constitute?

Q. This work that you spoke of after the track laying? A. Well, it depends altogether on the length of the line that you are operating from your headquarters. It may be—I should say average $75 and perhaps $100 a mile. It is a matter of judgment, if you please.

Q. This item of moved material to the front, then, is largely a matter of estimate? A. I know very well or very nearly what that would be. It would require thirty-six cars, to put the figures right down, thirty-six cars at 50 cents a piece, that is a very low estimate, those cars in the regular service would be earning $3 a day. Two locomotives with crews, fuel, coal, oil, waste, and water, $25 each, $50. $50 added to the $18, makes $68. You always have a caboose on the work, which at $2 a day would make the amount $70, and while you are laying track economically, you do not go much more than one-half a mile a day. Multiplying the $70 by two you have $140 per mile. That is the way I make it.

Q. I notice you have 288,000 feet crossing plank for 1,200

crossings. You take the total number of crossings on the mileage or is that estimated? A. That is in a degree estimated.

Q. It will take a little more on an average than a crossing to a mile? A. Yes, sir; a little more than a crossing to the mile.

Q. 1,000 cattle guards, is that an actual number or estimated number? A. That is an estimated number. To ascertain the number of cattle guards multiply crossings by two.

Q. That is, you charge for two cattle guards for each mile of track on the right of way which is fenced? A. That is it, I think. I would like to look this over carefully, but I believe that is it.

Q. This transportation of men, how do you estimate that? A. I estimate that we, during the six or seven years that that work was going on, transported to South Dakota about six men to the mile. That would make 6,600. And that these men were recruited and sent an average distance, that is to say, from Chicago to Mitchell, 650 miles, Milwaukee to Mitchell, 570 miles, and Minneapolis to Mitchell, 415 miles, making the average distance about 500 miles, and at 2 cents a mile, it would make $10 apiece, the cost of transporting these men.

Q. That would not include the transportation of the men east again? A. No, sir.

Q. That would just simply take them to their work? A. It may include those same men two or three times over. It only gives less than 1,000 passes a year, you see.

Q. So that the item is not based upon what might be called the actual cost to the company of carrying the pas-

sengers? A. If you say 2 cents a mile is not, I believe it is calculated that we make no money in the transportation of passengers at that time, at least at 2 cents a mile.

Q. I do not suppose there is any record of the actual number of passes issued? A. I suppose those stubs have all been destroyed.

Q That would be the only record? A. Yes, sir. You see we may know how many passes are given out; we make a pass for John Smith and ten men; and John Smith and thirty men; that is the way those passes are given.

Q. The cost of buildings item, I understand you have no detailed statement of that? A. I have no detailed statement of that.

Q. Cost of right of way; is that estimated? A. We take the actual amount paid for same—and since last on the stand I have found that my statement is correct—taking the entire amount of money expended as shown by the books of the secretary of our company, and after an examination of the deeds of not only our own company, but of the companies that have been merged into ours, it gives us $128 as the average paid per mile of main line.

Q. How much ground is it to the mile that you require? A. For some portion of the road we have got 200 feet wide; that is where the land was owned by the government. Other places 100 feet wide and our stations average between eighteen and nineteen acres to the station.

Q. The freight on track material was estimated from Chicago, was it? A. I will show you how we arrive at that. Rails, splices, spike is hauled from Chicago to Mitchell, 655 miles; we call it 650 miles, 106,300 tons of rails hauled 650 miles at ¾ of a cent per ton per mile amounts to $518,212 50; 8,360 tons of splices hauled 650 miles at ¾ of a

cent per ton per mile, $40,755; 4,155 tons spike hauled 650 miles at the same rate, $20,255.63; 391,800 tons cross-ties hauled from Milwaukee to Mitchell 570 miles, called 600 miles, 391,800 tons of cross-ties averaging 220 pounds per tie hauled 600 miles at ¾ of a cent per ton per mile, $1,763,-100, total estimated freight on track material, $2,342,323.13. I don't know whether those are the figures in this estimate or not; the cents I have left off.

Q. And from what point was the freight on bridge and culvert material estimated? A. I took the timber and piles, assumed haul from Portage in Central Wisconsin to Mitchell 529 miles and called that 500 miles. Truss bridge material assumed hauled from Milwaukee to Mitchell 570 miles, called 600 miles; all this material did not come from this place, but I assumed what I thought, was an aggregate haul or an average haul rather for each material. There is 16,500 tons in trestle bridges and culverts hauled 500 miles at ¾ of a cent per ton per mile, $61,875. 700 tons of material in truss bridges hauled 600 miles at ¾ of a cent per ton per mile, $3,150. 11,690 tons of piles estimated at fifty pounds per lineal foot hauled 500 miles at ¾ of a cent per ton per mile, $43,837.50, making a total estimated amount of freight on bridge material $108,862.50.

Q. The freight included in your account amounts to very close to $2,000 per mile? A Yes, sir.

Q. You say the ties are estimated on the weight of about 220 pounds each? A. Yes, sir.

Q. In speaking of tons of rails, is that the ordinary ton or is that what is called the long ton? A. It is the long ton, 2,240 pounds.

Q. How is the other track material? A. That is the short ton.

Q. Spikes and plates? A. Spikes and plates on the short ton.

Q. And rails and splices, that is figures by the pound? A. Splices are figured by the pound; yes, sir.

Q. Then the item of betterment to roadbed and bridges estimated at five per cent., that is the estimate that you make of the betterment to the road since its construction? A. Yes, sir.

Q. And that is an estimate? A. That is an estimate. One of the most difficult things that we have to determine in this estimate, is the proper amount. There are other ways of reaching about the same figure by a very simple calcuation of what we know is approximately the daily average on one hundred miles, of subsiding of banks. That would be the principal item that would be covered in that.

Q. This interest upon the cost of the road, I understand you to say that you have taken the interest for one year? A. Yes, sir; I assume that it took nearly two years to complete this line, before this line was earning.

Q. So that you took the interest for one-half of that time? A. On one-half of that time. Whether that is just or not I don't know, but I know that we had the season before work, always a very large pile of material stored up and on hand.

Q. The material kept in store, about $300 per mile? A. Yes, sir; and I want to explain that. It is so much per mile. I have looked over our annual reports since 1869, when we had 936 miles of road, clear down to the present time, and it grew in the three years up to and including 1871, to 1,131 miles.

Q. That is about what we have in Dakota now? A. Yes,

sir; and I found that there was then on hand at the end of the year at the rate of $309 per mile of stock of material. I then took the average from 1869 to 1897, that would be twenty-nine years, and I found it averaged $312. I took the average for the last four years of our roads, and we have got 6,000 miles, and I found it was $314 per mile. It is material that we are obliged to keep on hand; in case you want a tie it is necessary that you have it; rails, frogs, ties, and a certain amount of fuel that you must have on hand in order to successfully operate the road, fixed capital locked up, and which is a part of the capitalization of the road.

Q. But when it is used it goes into the cost of maintenence or operation of the road? A. Yes, sir; it becomes active then and other material takes its place right away and is dormant.

Q. But it does not go to cost of road? A. It is a certain amount of fixed, permanent, dormant capital.

Exhibit 25 offered and received in evidence.

EXHIBIT 25.

ESTIMATED COST OF CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

Length of Main Track, 1,101.06 miles. Of Side Track, 86.15 miles

12,442,000	Cu. Yds. earthwork @ 15.16¢		$ 1,886,207 00
5,000	Cu. Yds. riprap @ $1.50		7,500 00
11,011,000	Ft. B. M. Timber in bridges and culverts, (including cost of erection), @ $30		330,330 00
467,600	Lin. feet piles in bridges @ 35¢		163,660 00
8	truss bridges		35,495 00
286	iron pipe culverts in place of wooden ones, betterment, @ $50		14,300 00
106,300	tons (gross) rails, average cost @ $46.761		4,970,627 00
8,310,600	lbs. track spike @ 2½¢		207,765 00
418,000	pairs of rail joint splices, complete, @ $1		418,000 00
3,562,000	cross ties @ 30¢		1,068,600 00
690	switches, complete, @ $100		69,000 00
10	railroad crossings, @ $200		2,000 00
1,187	21-100 miles track laid and surfaced @ $450		534,244 00
267	miles of track ballasted, @ $500		133,500 00
1,101	miles of track, the material for which was moved to the front from the nearest point of distribution at cost per mile of $140		154,140 00
505	miles of right of way fenced, @ $280		141,400 00
32,000	panels snow fence (100 miles) @ $2.10		67,200 00
288,000	ft. B. M. crossing plank (for 1,200 crossings, @ $20 per M		5,760 00
1,000	cattle guards, estimated, @ $10		10,000 00
	Freight on track material, @ ¾¢ per T. M		2,342,323 00
	Freight on bridge and culvert material @ ¾¢ per ton mile		108,862 00
	Freight on contractor's tools and supplies @ ¾¢ per ton mile		8,250 00
	Freight on contractors' teams to work, @ ¾¢ per ton per mile		6,600 00
6,600	men transported to the work (2¢ per mile)		66,000 00
256	station sign boards @ $6	$1,536	
1,200	highway sign boards @ $5	6,000	
40	R. R. crossing sign boards @ $6	240	
40	R. R. crossing stop boards @ $6	240	

2,000 whistle posts @ $1	2,000	
510 mile posts @ $1	510	
1,100 rail rests @ $1	1,100	11,626 00
Cost of buildings, including shops, freight and passenger stations, coal sheds, tool houses, stock yards and water stations, as per estimate of bridge & building department		940,606 00
Cost of right of way and station grounds, 1,101 miles @ $128 per mile		140,928 00
Cost of telegraph lines, instruments and tools owned solely by C., M. & St. P. Ry. Co.		40,626 00
One-half cost of telegraph lines, instrument and tools owned jointly with telegraph company		30,656 00
Engineering, superintendence, legal and general office expenses, estimated @ $300 per mile of main track		330,300 00
		$14,246,505 00
Add interest on the cost as above given for one-half the time during which the line was under construction, one year @ 6%		854,790 00
Track tools, 125 sections, @ $138 each		17,250 00
Station furniture and supplies 94 stations, @ $78		7,332 00
		$15,125,877 00
For betterment to roadbed and bridges, etc., estimated at 5% of the above		756,294 00
Total estimated cost of lines in South Dakota, exclusive of equipment, shop plants outside of the state and stock of material.		$15,882,171 00
Making total cost per mile of main track, exclusive of equipment, shop plants outside of the state and stock of material		14,425 00
To which add for permanent supply of dormant, or non-earning, material, kept in store and without which the railway could not be successfully operated		300 00
Total investment per mile, exclusive of equipment and shop plants outside of the state		$14,725 00

Chicago, January 25, 1898.

Whereupon further hearing was continued to 10 o'clock a. m., January 31, 1898, to be resumed at the same place.

January 31, 1898, 10 o'clock a. m.

D. J. WHITTEMORE:

Re direct Examination by Mr. Peck.

Q. In determining at what place you would obtain material for construction, during the construction of the South Dakota lines, by what rule were you governed? A. I was directed by the management to estimate for transportation the cost of transportation from the place of origin or from the place at which material was procured to the place of destination, or the place at which it was used, at the rate of three-fourths cents a ton a mile. Adding this cost of transportation to the price to be paid for material, I could then determine from what place it was cheapest to procure material, and this process was carried out so far as I know.

Q. And your estimate, to which you testified Saturday, or the other day, is based upon that process? A. Yes, sir.

Q. Now, Mr. Whittemore, I wish to ask you how would the cost of replacing the lines in South Dakota by our company in the exact situation that they are to-day, having the same degree of efficiency for the purpose of operation, compare with the original cost of those lines, as estimated by you in your testimony? A. In the first place I wish to say that it is impossible to replace a railroad because it is a growth of years and a new line cannot be constructed which will replace an old line with the solidity, permanency and added efficiency which it has acquired from being used and operated for a series of years. Taking these considerations

into account, these lines, these South Dakota lines, having been in operation from eleven to nineteen years with the expenditures which we have made on improvements and betterments, taking into consideration the low price of steel and iron, the higher price of other material and the greatly increased price of right of way and of station grounds, I do not believe the lines could be replaced at a less sum than I have given in my estimate.

Q. State whether or not in your judgment as an engineer the entire system of the Chicago, Milwaukee and St. Paul Railway, including its tracks, roadbed, stations, station grounds, its shops and shop facilities, equipment, terminals, and all other things that constitute an efficient railway, could be replaced for $34,618.66 per mile? A That is as I understand it, the capitalization of the lines, I am of the belief that it could not be replaced for anything like that sum—or many thousand dollars a mile or more.

Re-cross Examination by Mr. Null.

Q Mr. Whittemore, in considering this last question, capitalization, of $34,000 per mile, you apply that solely to the roadbed and real property of the company? A. No, sir; the entire property owned by the company.

Q What proportion of the total investment is represented by the cost of right of way or present value of right of way? A. I could not say. Take Chicago, Milwaukee, Minneapolis, St. Paul, and a few other places like that, the value of right of way is almost inestimable.

Q Now, in South Dakota, the cost of right of way was $128 per mile? A Yes, sir

Q. And was comparatively an insignificant item? A. Yes, sir; it was an insignificant item.

Q. But, I suppose your terminals in Chicago, Milwaukee and Minneapolis were something of a considerable item in the cost of the property? A. It was.

Q. Can you give us any idea at all as to the value of the terminal property within the limits of the City of Chicago? A. I cannot. I should want to spend several days in investigating that subject and in consulting others who know of the property. I know this, that about 1872 to 1878 we paid about one and a half million dollars for realty in the City of Chicago at that time. What it is worth to-day I cannot say.

Q. Now, at this time, you have no—in your own mind you have no conception of the value of the property? A. No conception which I wish to express, that I feel like expressing under oath. It would be too indefinite.

Q. What is the expense of building a second track as compared with the construction of an original track. Second main track, I mean. A. We are now building second track that costs three times what the original track cost.

Q. Costs three times what the original track cost? A. Yes, sir; per mile. We are bettering it; making it on better grades.

Q. Built on the same grades and practically out of the same material, what would be the relative cost? A. It would depend altogether on where it was.

Q. Say in a prairie country like South Dakota or Western Illinois? A. Building a double track?

Q. Yes, sir? A. It would be approximately the same as the main track approximately, I say.

Q. The only difference would be possibly a little saving in grading? A. A little saving in grading. The grading there is comparatively an unimportant matter as to expense.

Q. So that if the construction of a second track this present year costs a certain sum per mile you would say that was at least a fair representative of what the original line cost? A. No, sir; the second line is a line by itself. The original track has many other things; station buildings round house, side tracks, and all those things.

Q. I am speaking now with reference to the construction of the track itself, the grades and the rails and ties. A. It would be practically the same.

Q. So that the only difference between the construction of the second track and the main line would be the accompaniments such as station houses and side tracks that would not have to be replaced in the construction of second track? A. Round houses and all the other things, buildings, water stations, everything that goes in the cost of making a railway would not enter into the second track.

Q. Now, Mr. Whittemore, do you remember the construction of the Sisseton extension of about four miles of road? A. There was four miles, yes, sir.

Q. Let me ask you if the construction of that extension cost as much per mile as the construction of the other lines in South Dakota, excepting station houses and side-tracks? A. There were a few miles in there that was laid and then taken up. We laid the iron on some four or five miles beyond where the terminal was for several years and took it up again. We had a grade something beyond that. I will not state the year, but afterwards, some citizens there proposed to our company to finish the grade, a few miles—I don't know how many it was now—and we were to furnish the material and lay that track, and we did so. What material was to the mile I do not know, but we had our own grade the greater share of the distance and had taken up

the track. It was afterwards extended a little beyond the grading; the citizens did the grading, that portion extending beyond, and we laid the track. That is my recollection.

Q. The Town of Sisseton is now the terminal of that branch? A Yes, sir.

Q. And this four miles, or whatever the distance is, was from the end of the line at that time to the point where this Town of Sisseton was laid out? A. Yes, sir We had it graded four or five miles beyond that, but took the track up and relaid it a short distance beyond Sisseton.

Q. So that if that item appears upon the books as $20,000 for construction of that four miles, it would represent the cost of relaying the track? A. I do not know what the $20,000 represents?

Q. Under your statement to me, that is, you say you practically had the grade, then you simply relaid it? A. Yes, sir

Q. So that if the money expended at that time was about $20,000, it would represent the relaying of that track and the property at Sisseton? A. Materials used, I suppose it would I do not know the facts of the case at all, other than those I I have stated.

Q. What weight of rail was used last year in the construction of second track west of Chicago between Chicago and the Mississippi river? A. Between Chicago and the Mississippi river, seventy-five pound rails last year. We laid some eighty-five pound. The later steel we have got is eighty-five pounds. I do not know what particular division it went on. I believe it was on the heavy traffic line between Chicago and Savanna.

Q. Are you able to state at this time the cost of that

second track per mile? A. It will aggregate about $700,000. That is to say, for thirty-five miles. That which we have under way now will cost about $20,000 per mile. It is not a parallel to anything you have in South Dakota.

Q. It is better constructed? A. No, sir; it is through a different country.

Q. And the grading is different? A. Yes, sir.

Q. And of course the ballast is altogether different? A. The ballast would be of a different character. It is not completed yet, but that is my estimate of the cost of the whole.

Q. And of course you use a much heavier rail? A. Yes, sir; it is a heavier rail.

Q. And the construction of this second track that you speak of would be much more expensive than the construction of the road in South Dakota? A. Yes, sir.

Q. I will ask you the question, you may state, if you recollect, who were the contractors that constructed the lines in South Dakota? A Langdon & Company, I think, was the name.

Q. Where was their principal office at that time? A. Well, I think D. C. Shepard was in St. Paul, and R. B. Langdon in Minneapolis. They were the principal contractors.

Q. And their contract only related to the roadbed and grading? A. Yes, sir.

Q. Do you recollect whether the depot buildings, turntables and other structures were bulit by other contractors or by the company? A. All of those buildings were built by the company, by our own force, as I recollect it.

Re-direct Examination by Mr. Peck.

Q. Mr. Whittemore, do you wisk to make any suggestion as to any articles omitted from your estimate the other day? A. It has occurred to me since I have been sitting here, gentlemen, that I omitted in my estimate two small items of cost. One is the inspection of rails, which at that time cost about ten cents a ton. That is, the inspection at the mill, not included in the engineer's report at all. As the splices, spikes and rails amount to about 100 tons to the mile, it would amount to about $10 a mile. Again, in our calculation of splices, I took into account only the splices and the splice bolts and their nuts, and not the lock nuts. I have run through my mind the number of lock nuts, little pieces of iron that go in between the leaves and the nut itself Splices, per mile, 352 multiplied by 4 nut locks to each splice makes 1 408 to one mile of track, those nut locks at that time cost $16 a thousand, 1 400 would cost about $23 a mile, so that, added to the $10 for inspection, makes an increase in my estimate of $33 a mile made in that manner.

January 31, 1898, 2 p. m.

W. G. COLLINS, a witness called and sworn on behalf of the complainant, testified as follows:

Direct Examination by Mr. Peck.

Q. What position do you hold, Mr. Collins, with the Chicago, Milwaukee and St. Paul Railway Company? A. General superintendent.

Q. How long have you been general superintendent? A. Since 1890.

Q. What are the duties devolving upon you as general superintendent of this railway company? A. I have immediate charge of the operation and the maintenance of the road.

Q. How long have you been in the railway business? A. About thirty-one years.

Q. In what capacity did you first enter railway service Mr. Collins? A. As a telegraph operator.

Q. When was that, at what place and with what company? A. At Watertown, Wisconsin, in 1886 with the Milwaukee and St. Paul Railway Company; I think that was the name of it.

Q. State in what service you were first engaged after being telegraph operator at Watertown, and state generally what positions you have held and the experience you have had in railway service? A. I was at Watertown only a short time, then returned home and attended school; in the fall of 1867 I was appointed night operator and ticket clerk at Portage City, Wisconsin. I remained there about a year. Then I went to New Lisbon, Wisconsin, as operator and freight clerk and remained there about a year. Was then operator and car record clerk in what was called the South Milwaukee yards for a few months, then was telegraphing at Minneapolis for about a year and then went to the Northern Pacific Railway Company as operator with the engineering corps. I was chief operator and acted as train dispatcher during the construction of their line across a part of Minnesota and part of Dakota. I left there in the fall of 1872 and went in the engineer corps of the Chicago and Canada Southern Railroad until July, 1873, then I went to Milwaukee and was made assistant train dispatcher on the LaCrosse division of the Milwaukee road. I was made

chief dispatcher of the La Crosse division in, I think, 1876, and afterwards chief dispatcher of the Chicago and Milwaukee division. Was promoted to assistant superintendent of the La Crosse and Wisconsin Valley divisions in 1881. Was made superintendent of those divisions in 1884. Was promoted to be assistant general superintendent of what was known as the middle district, which comprised the lines in Wisconsin, and Iowa, Dakota division in 1887. Was transferred to the Northern district with headquarters at Minneapolis, in 1888, and from that position was appointed general superintendent in 1890.

Q. General superintendent of the system? A Yes, sir; in 1890.

Q. State whether as general superintendent of the system, it is your duty to have a full and complete knowledge of the operations of the road so far as the handling of its trains and maintenance of its property is concerned? A. It is.

Q. Are you acquainted with the entire system, including the lines of South Dakota? A. Yes, sir.

Q. Have you been over the entire system, including the South Dakota lines? A. Yes, sir.

Q. Frequently? A. Yes, sir; a great many times.

Q. Have you a full and complete knowledge of the equipment with which the Chicago, Milwaukee and St. Paul Company is supplied for the operation of its road? A. Yes, sir.

Q. How is that knowledge derived? A. From personal knowledge and from records kept by the heads of the various departments that are charged with that detail.

Q. How many locomotives are owned and used by the company upon its entire system? A. 842.

Q. How many freight cars of all classes are owned by the company? A. 28,214.

Q. How many other cars are owned and used in the service? A. There are 780 passenger cars of all classes.

Q. What other cars has the company besides those you have named? A. It has 491 caboose cars.

Q. How many locomotives are required and used for the South Dakota lines of the system? A. 65.

Q. How many freight cars are required and used in the conduct of the freight business of the South Dakota lines in South Dakota? A. 3,500.

Q. Now, you may state, how those freight cars are divided or classified? A. Box cars, 3,100; stock cars, 200; flat cars, 175; refrigerator cars, 25.

Q. How many passenger cars of all classes are there on the South Dakota lines? A. Sixty-eight.

Q. Is not a certain proportion or number of the locomotives or cars of all kinds constantly in the shops for repairs? A. Yes, sir; and I have estimated the shop margin of locomotives and of cars in my figures, or rather I have allowed for that.

Q. How many mail and express cars in South Dakota on the South Dakota lines? A. Thirteen.

Q. How many baggage, mail and express cars? A. One.

Q. Passenger, mail and baggage? A. Three.

Q. How many passenger and baggage cars? A. Six.

Q. How many mail cars? A. Three.

Q. How many baggage cars? A. Three.

Q. How many coaches? A. Thirty-eight.

Q. How many sleepers? A. One.

Q. How many cabooses? A. Forty; these include the repair and shop margin based on what our records show to be the number required.

Q. Have you any snow plows on the South Dakota lines; rotary snow plows? A. Yes, sir; we have one rotary plow.

Q. What other cars have you there? A. Wrecking cars, tool cars and flanger cars, fifteen altogether.

Q. Have you any other equipment than that you have named on the South Dakota lines? A. We have a weed burner car, two pile drivers with two pile driver tenders.

Q. Are you prepared to give the cost of this equipment about which you have specified? A. No, sir; I cannot.

Q. Are your figures of the equipment based upon the present business in South Dakota? A. Upon the business that we have been handling in South Dakota, say, during the past year.

Q Well, is the present equipment as great as you have had to use at some other stages of the business operation of the South Dakota lines? A. No, I think not. We formerly run more passenger trains in South Dakota than we are now running. Business was much better and it required more service, and as the business fell off some reductions were made in the train service. We released some of the passenger train equipment.

Cross-Examination by Mr. Null.

Q. Can you give a description of the sixty-five locomotives? A. No, sir: not from memory, and I may say that of course these same sixty-five locomotives do not remain within the geographical lines of South Dakota all the time.

Q. The engines are changed about? A. Yes, sir.

Q. Do you mean they are changed about some, or is the entire list changed from time to time? A. Well, it is possible that in the course of a number of years the entire list would be changed.

Q. Is not it a fact that the engine running between Aberdeen and Mitchell in the passenger service would remain there until some change was necessary by reason of sending it in for repairs or something of that kind? A. Yes; and the engine that took its place might remain on the run until it required repairs. It would, however, be the same class and style of engine.

Q. Is not it a fact that a certain engine on the passenger run between Aberdeen and Mitchell has been on that run ever since that line of road was opened, except when it would be in the shop for repairs? A. I do not know that it is a fact.

Q. Is there any engine in South Dakota that could be said to be permanently stationed on any run? A. What do you mean by permanently?

Q. That is, that the engine is kept upon a certain run until it is taken off for repairs, and as soon as the repairs are made, it is returned to that run? A. In that sense, no. It might go back in some instances, probably would, but it might not. The engine, as I said before, taking its place might remain there, and after this engine was repaired, it might be assigned to some other place, either South Dakota or some part of the system.

Q. Is there a rule upon your system by which certain engineers, operating certain engines, have certain engines assigned to them which they operate? A. Which they run?

Q. Yes. A. That varies very much. For instance, on the line between Milbank and Sisseton probably one engine crew would be assigned to one engine, and would remain on that one engine, until it was shopped. On other portions of the system there are many more engine crews employed than there are engines so that different men run the same locomotive.

Q. Is that true with reference to the regular runs, or does that apply more generally to what might be termed the "chain gang"? A. That also varies; it is a difficult question to answer in a general way. Our practice, however, is to assign an engine crew to an engine where we can do it, and hold the crew responsible for the locomotive.

Q. That is, where the run is regular, such as a regular passenger run? A. Yes, sir.

Q. Under your system of operation in the matter of assigning engines to engineers, the engine is assigned to a certain engineer who is held responsible for that engine to the extent of a certain number of miles per month? A. Well, he is held responsible for reporting the condition of the engine all the time, so long as he is in charge of it. When he is relieved he reports its condition and when he takes it again he reports it.

Q Now, then, the engine is not operated by any other engineer, except when it is necessary to do more than the ordinary work of that engine? A Well, ordinarily that is the practice; of course, if a man is ill or for any reason is out of service the company puts other men on the engines.

Q. This rule is seldom varied with reference to engines upon regular runs? A It is the practice to assign engineers to regular runs so far as it is practicable to do so.

Q With reference to the age of the engines, what engines

are assigned to South Dakota lines? A I think the question of age has nothing whatever to do with the assignment. In the first place, the capacity of the engine is taken into consideration for the service required, grades and so forth, weight of train and speed; next, the condition of the engine. Our experience with engines in Dakota is that on account of bad water they give out and require repairs much earlier than they do on varions other portions of the system. We can take a leaky engine from a South Dakota run, for instance, and put it on a Wisconsin line and it will tighten up and run on the Wisconsin line for some time. In sending engines to Dakota, we aim to send only those that are in first class condition to stand the service.

Q It is a fact, is it not, that on your line from Aberdeen to Ortonville, the traffic is heavy enough to require first class engines? A. Well, the traffic in connection with the trade is heavy enough to require a large engine to operate it economically.

Q. And as a matter of fact, you have on that division about as good engines as you have on the system? A. We have what is called our standard ten-wheel engine in freight service on that line.

Q. Have you any larger or heavier engines on your system than those upon the H. & D.? A. Yes, sir.

Q. Whereabouts are those heavier engines used? A. They are used between Chicago and Savanna, and between Milwaukee and LaCrosse, although there is very little difference.

Q. Do you use heavier passenger engines at any point in your system than you use from Aberdeen east? A. Yes, sir; a number of places.

Q. Where, are they used on your main lines through Illinois and Iowa? A. Yes, sir; and in Wisconsin and Minnesota.

Q. The heaviest freight engines used in South Dakota are upon the H. & D.? A. Yes.

Q. And the heaviest freight usually in South Dakota is upon the H. & D., is it not? A. Yes.

Q. The traffic on the "Jim" river line is handled with comparatively light engines? A. Yes, sir.

Q. How do the engines upon the line from Sioux Falls to Sioux City compare with the engines used on the H. & D.? A. The freight engines on that line are standard eight-wheel freight engines; they are sixteen or seventeen by twenty-four inch cylinders. The H. & D. engines are standard ten wheelers.

Q. When you say ten wheel engine, you refer to an engine having how many drivers? A. Three on each side.

Q. In saying ten wheels, you estimate the wheels under the truck? A. Under the engine truck.

Q. So that the H. & D. would use ten-wheel engines and the Sioux City and Sioux Falls lines uses eight-wheel engines? A. Yes, sir.

Q. What engine do you use on the Sioux City and Mitchell line? A. About the same class as on the Sioux City and Sioux Falls.

Q. What class of engine do you use on the Chamberlain line? A. The same class; a seventeen by twenty-four inch cylinder engine is used on the Chamberlain line in the winter on account of the snow.

Q. Are you able to tell the name of the manufacturer of these engines; that is, what engines they are? A. No, sir.

Q. Whether Grant engines or what they may be? A. No; I cannot tell that without consulting the record; I think the record is incomplete.

Q. You have some Grant locomotives, have you not, on your system? A. Yes, sir.

Q. And some Baldwins? A. Yes, sir.

Q. And some made by your company? A. Yes, sir.

Q. Have you any engines in South Dakota that have been constructed in the last eight years? A. I cannot answer that question.

Q. Are you familiar with the engines that have been purchased or constructed by the company, say in the last five years? A. Yes, sir.

Q. What has been the class of engines that have been purchased or constructed during that period? A. Well, the engines purchased have been ten-wheelers and the most recently purchased engines are what are known as compound engines. The engines constructed have been what we call "Class B" and I think some switch engines. A class B engine is equivalent to about a seventeen inch cylinder ordinary freight engine.

Q. With how many wheels? A. Eight wheels.

Q. There are no compound engines in the South Dakota service? A. No, sir.

Q. Are you familiar with the quantity of fuel consumed by the different styles of engines, comparatively speaking? A. I don't quite understand what you mean; on what basis?

Q. Well, are you familiar with the quantity of fuel required for a ten-wheel compound engine as compared with an eight-wheel ordinary engine? A. The fuel consumed

depends upon so many things that I can hardly answer that question. I know in a general way.

Q. Of course the larger engine would presumably use more fuel than a smaller engine? A. No; not always.

Q. It would not? A. No.

Q. You think that a new ten-wheel compound engine can be operated upon a consumption of fuel not greater than the fuel consumed by the old style eight-wheel engine? A. I think it can haul more tons of freight with a less consumption of coal per 100 tons than the old style engine could haul.

Q. So that it is in that respect an improved engine? A. Yes, sir.

Q. What do you regard as a load for these new ten-wheel compound engines? A. That depends upon where it is run, sir.

Q. Well, in ordinary condition? A. Well, the conditions vary so very much.

Q. Take it from here to Savanna? A. We make no distinction between the compound engine and the simple engine in loading the engines between here and Savanna, except when the compound engines are larger or of greater capacity and we have such a peculiar class of business to handle there that it is difficult for me to say. It depends upon the trains and the speed. A train of dead freight for our standard ten-wheel engine either compound or simple running at a slow speed under favorable weather conditions, from Savanna to Chicago, would be about 1,000 tons behind the engine, that is, the entire load of train and contents. I might add that in actual practical service, however, the trains do not haul that tonnage.

Q. Take it in hauling coal or wheat, one of those ten-

wheel engines would ordinarily handle fifty loads, would it not? A. That depends upon the grade.

Q. Between here and Savanna? A. No.

Q. What is the relative capacity of the eight and ten-wheel engines? A. Taking say seventeen-inch cylinder, eight-wheeler freight engine, and a standard ten-wheel freight engine on a one per cent. grade, the ten-wheeler would pull from six to eight loaded cars, more than the eight-wheeler. There is no positive amount of difference.

Q. And on that grade and under those conditions the eight-wheeler engine would pull about fifteen to eighteen loads? A. That again depends upon the speed; I should say ordinarily, if dead traffic, about twenty cars.

Q. What class of repairs is your company prepared to make to its engines at the shops in South Dakota? A. Only the most necessary running repairs.

Q. They are not fixed there to make any important repairs? A. Not what are known as general repairs, that is, a general overhauling of the engine.

Q. Where are the nearest shops to South Dakota at which general repairs to locomotives are made? A. We have general engine repair shops, at Minneapolis, at Dubuque and at Austin, and also at Milwaukee and Fort Howard.

Q. In estimating the number of locomotives on the South Dakota lines, how do you divide or apportion the locomotives of South Dakota with a run for instance, between Milwaukee and Montevideo? A. We have only one train that runs that way now. Milbank as a division station for the through traffic has been abandoned, but in calculating the number of engines required to handle the business in South Dakota

I took the engines that run between Aberdeen and Montevideo, there being only a small portion of the line in the State of Minnesota, and it would require practically the same number of engines to handle the business to the state line that is required to handle it to Montevideo.

Q. And did you calculate all the engines that are used between Mitchell and Sanborn? A. No, sir; I calculated the engines used between Mitchell and Canton, that is, the proportion based on the milea e between Mitchell and Canton. I omitted from the calculation the engine handling the passenger train that runs between St. Paul and Milbank, and did not take into consideration the Fargo Southern line, the mileage of which, in South Dakota, is too small to speak of.

Q. Where is the snow plow located? A. In the winter time at Montevideo.

Q. It is destined for use on the H. & D., is it not? A. Yes; on the H. & D., and on other of the Dakota lines. We have another rotary plow that is located either at Austin or at Sanborn as the conditions require, which is also used in South Dakota. Both of the rotaries work on any of these lines in South Dakota when necessary. They worked nearly all last winter in South Dakota.

Q. Where are those wrecking cars? A. They are located at the various division points, such as Aberdeen, Mitchell, Madison, Milbank, and so forth.

Q. Now, in the estimate that you make of 3,500 freight cars in South Dakota, that is an approximation, is it not? A. That is the smallest number that I consider necessary to assign to take care of the business of the South Dakota lines.

Q. Is not it a fact that the freight cars run over the entire system? A. Yes, sir.

Q. There is no one freight car assigned to South Dakota, no particular car? A. That is, in freight service?

Q. Yes? A. No, sir.

Q. So that the only way you can get at the number of freight cars is by some sort of computation of about what is necessary to handle the business? A. Yes, sir.

Q. You have your car accountant? A. Yes, sir.

Q. To whom the station agents report daily the cars and where they are? A. Yes, sir.

Q. So that it would be possible to know the number of cars upon the track in South Dakota any day in the year? A. Yes, sir; but that would not indicate the number required.

Q. No, but that would indicate the actual number there? A. That would indicate the number that were standing on tracks, but it wouldn't indicate the number wanted. You must bear in mind, also, the number moving in trains in both directions; that could be arrived at, however.

Q. Your car accountant is able to state, is not he, from reports made to him, the total number of cars within the boundaries of South Dakota, either standing on side-tracks or moving in trains? A. At a given time?

Q. Yes. A. Yes, sir.

Q. I wanted to know whether those 3,500 cars is arrived at by any averaging of the figures given by the car accountant. A. No, sir.

Q. It had no relation to that? A. I took it for a period, at a time when the shipments were heaviest and at a time

when we were unable to meet the calls for cars in South Dakota, took the average daily loading and the time, a less time than it really takes to make the round trip with the cars as they ordinarily go from point of shipment to destination and return, and used that as a basis to make those figures. I considered that was very conservative and I know personally, that number of cars did not anywhere near fill the requirements last fall.

Q. So, then, the 3,500 would represent the number of cars engaged in handling the South Dakota traffic? A. That is the way I estimated it; yes, sir.

Q. And not necessarily the number of cars actually within the borders of the state? A. There would not be that number of cars within the border of the state at any one particular time, but they would come in and go out within a certain number of days in order to handle the traffic.

Q. 200 stock cars, those stock cars are only in use at certain seasons of the year, are they? A. That was once true of South Dakota, but I am glad to say that it is not true today. They are in use more or less all of the year and the estimate for our lines in South Dakota is below the number necessary to fill the requirements. I think we have handled over 200 cars of stock in South Dakota in one day.

Q. The refrigerator cars; what particular service are they engaged in? A. They are engaged in taking perishable products into the state, but principally in taking out dairy products which are constantly growing larger in South Dakota.

Q. You say there are sixty-eight passenger cars in South Dakota? A. Yes, sir.

Q. Do you mean that that is the total number of cars used in forming passenger trains, or there are that many passen-

ger coaches? A. There is that amount of passenger equipment of all kinds.

Q. Thirty-eight passenger coaches? A. These figures allow for shop margin, and in regard to the coaches, it allows for shopping and excursion ten coaches altogether.

Q. Did you include the coaches that run from Aberdeen to St. Paul and Minneapolis? A. I included one of the trains only.

Q. There is a train each way at night? A. Yes, sir.

Q. And you only include one train? A. Yes, sir.

Q. That would be only one-half of that equipment? A. Yes, sir.

Q. How do you count the coaches that run from Manilla to Aberdeen? A. I count one train on the James river division and one train on the S., C. & D.

Q. The Sioux City and Dakota division? A. Yes, sir.

Q. That would be one train to Mitchell? A. One train between Mitchell and Sioux City and one train between Aberdeen and Mitchell.

Q. A day? A. Yes; to equip one train per day in each direction between Aberdeen and Sioux City.

Q. That is, as I understand you, there is one train between Aberdeen and Mitchell, and Mitchell to Aberdeen, and Mitchell to Sioux City and from Sioux City to Mitchell, making practically one train each way a day between Aberdeen and Sioux City? A. Yes, sir.

Q. So that, in that respect you make no allowance by reason of the fact that those engines run beyond Sioux City. A. No, sir.

Q. How do you make the assignment of the coaches run-

ning between Mitchell and Sanborn? A. I assumed two trains between Sanborn and Mitchell; one of which I assigned to South Dakota, viz., one mail car, one baggage car and two coaches.

Q. The cabooses; I believed you figured there are forty of those? A. Yes, sir.

Q. Are those figured on the same basis as the freight cars? A. No, sir; they were figured on the cabooses actually in service in the state and running into and out of the state; apportioning to the State of South Dakota on the basis of their mileage in the state and out of it, those in inter-state service.

Q. What is this weed burner? A. It is an experiment largely, but a very successful one. It is a car equipped with appliances for forcing oil into tubes and burners by means of compressed air—which when ignited makes a very hot blaze and when slowly drawn over the weeds, kills them and it is used as a means of getting rid of weeds economically.

Q. On the roadway? A. On the track; it only burns to the edge of the ties and it is followed up by two men who put out all the fires to prevent them from catching along the right of way and setting out fires.

Q. Operated with an engine? A. We have tried it both ways, having propelling power on the car and with a locomotive and we shall probably use a locomotive in the future as giving the best results. We contemplate building some more of them.

Q. Are you familiar with the value of this equipment? A. Well, I know about what the equipment is worth; I can't give the exact figures but I can give it in round numbers.

Q. Without asking you to state in dollars and cents the cost of these coaches, which is the more valuable, the ordinary passenger coach or the combination baggage, mail and express car? A. Ordinarily the coach.

Q. Which of these combination cars are the more valuable; there are several kinds that you have testified to here? A. The cars containing the mail rooms, that is, a mail and express or mail and baggage car would cost more than a straight express or baggage car. A combination passenger and baggage car would cost more than a mail and baggage car.

Q. Which is the more valuable, a passenger coach or a mail car? A. The passenger coach.

Q. So that of all this equipment that you have testified concerning, the passenger coach would be the more valuable with the exception of the sleeper? A. Yes, sir.

Q. And which is the more valuable, the passenger coach or the sleeper? A. The sleeper.

Q. Which is the more valuable, the sleeper or the dining-car? A. You can make either one of them cost a large large amount of money; it depends upon how much ornamentation and so forth, you care to put on it. Ordinarily the new modern sleeper would cost, I should say, a little more than a new modern diner, but it depends so much on the interior furnishings and decoration that I cannot say. There would be very little difference in the cost of the frame or trucks of the car, roof and so forth, but its interior finishings would make the difference.

Q. Is there any material difference in the cost between a sleeper and a buffet car? A. Not so very much if both are of the same class, style, and finish.

Q. Which would you say was the more expensive of finish? A. I think the sleeper.

Q. Is there any material difference in the value of a passenger coach as to whether it is seated with ordinary seats or seated with reclining chairs? A. Very little.

Q. These 3,500 freight cars are composed of all classes with reference to size, capacity and age, are they? A. Yes. Of course, the average capacity is increasing, because the older cars are growing weaker, and they are the cars that are scrapped, torn down, and so forth, and replaced with newer, larger and greater capacity cars.

Q. What is the length of the new car you are putting on the system now? A. The ordinary box car you mean?

Q. Yes? A. They are thirty-three feet inside.

Q. What is the capacity? A. 60,000 pounds.

Q. And your freight cars vary from that size and capacity to the old small box cars? A. Yes, sir.

Q. What was the size and capacity of those old small cars? A. The oldest ones were 28,000 pounds capacity; I don't recollect the dimensions, but there are very few of them left; also a very few 30,000 pound capacity cars. There are some new 40,000 pound capacity cars, and from that up to 60,000 pounds.

Q. Are the new cars all equipped with air brakes and couplers? A. Yes, sir.

Q. What is the proportion of this 3,500 that you would say was equipped with air and couplers? A. About fifty-two per cent. with air and about seventy-two per cent. with couplers, between seventy-one and seventy-two per cent., I think, with couplers.

Q. These cabooses, is there any material difference in their style and make? A. No, sir.

Q. They are about the standard caboose? A. Yes, sir.

By Mr. Temple.

Q. What is the average daily run made by locomotives in South Dakota, hauling trains? A. Well, I can't answer that question.

Q. How does it compare with the average daily run made by engines hauling trains on other portions of your system? A. I should say the average daily mileage of the engines would be less in South Dakota.

Q. Than on the remainder of your system? A. I think so, although it is a difficult question to answer.

Q. You are not sure about that? A. No, but I feel confident that it would be less. I know it is a great deal less than on our main through divisions where we have extra engineers, that is more engine crews in service than we have engines in service. On other portions of the line it would probably be about the same.

Q. What constitutes a day's wages for engineers and firemen in South Dakota, on your system? A. They are paid by the mile and 100 miles.

Q. Of a day's wages? A. Yes, sir; 100 miles is called a day, and they are paid by the mile. If an engine crew exceeds 100 miles, then they receive more compensaton, being paid by the mile. If I understand your question I think I can answer it. For instance, an engine crew on the Sisseton line, we will say, doubles that line; they make seventy miles of mileage but they get pay for 100 miles at what is known as the short day rate, which is 20 cents for

the engineer and 10 cents for the fireman less than what is known as the full mile day, or 100 mile day, rate, but if the division was only ten miles long, and they only made ten miles, they would get the day just the same. The practice on the entire system is uniform in every respect in regard to the pay of men in the train and engine service.

Q. Is not 100 miles taken as the basis for paying the engineers and firemen because that is the average daily run of the engines? A. No; it was taken as a basis because in the old times the division stations were usually located about 100 miles apart, but the modern practice is to locate those stations from 125 to 150 miles apart, so as to get more mileage out of engines and have less stoppages to trains. It was taken simply as a unit to arrive at the compensation, but the compensation is by the mile; it is so much per mile run.

Q. Can you tell us what is the average daily run for an engine, hauling trains on the South Dakota lines? A. No, sir; it varies.

Q. Can you tell us what the average daily run would be on your entire system? A. No, sir; that depends on so many different things, it would be impossible to get an average or to make an average.

Q. How do you determine the number of engines which belong to South Dakota when many of the runs are partly in South Dakota and partly in other states? A. I took the number that are in the State of South Dakota, and took a proportion of the number that run in and out of the state, based on the total number used to handle the traffic and apportioned the number to South Dakota on the basis of mileage in that state.

Q. By the actual mileage or train mileage? A. By the

actual mileage. For instance, as I explained, I think, before you came in, on the H. & D. division between Aberdeen and Montevideo, I called all but three of the engines in feight service, and two in passenger service, as being assigned to South Dakota. The mileage is nearly all in South Dakota, only a small portion being in Minnesota and the same number of engines would be required to handle the trains if only operated to and from the state line.

Q. How many of these sixty-five locomotives that you charged to South Dakota are used in pulling trains? A. Well, all of them, at one time or another; last fall the full number were practically employed in pulling trains. In getting at the number required to handle traffic in South Dakota, I allowed a shop margin of five engines in my statement of sixty-five engines required.

Q. What do you mean by shop margin? A. Well, engines wear out and they must go to the shop for repairs. The business cannot be stopped: other engines have to be supplied while they are being shopped, and we always are obliged to figure on a shop margin both for engines and for cars and equipment of all classes. It is based on experience which has demonstrated to us about what percentage must go to the shop for repairs each year.

Q. Do you apportion the cars to South Dakota on a train mileage basis? A. No, sir.

Q. How did you arrive at that apportionment? A. I took the average loading of cars in South Dakota for a period and the average time it took for those cars to make a round trip and calculated that it would take so many cars to supply that average loading and I may say that last fall we were not anywhere near able to fill the orders that were made for cars in South Dakota.

Mr. Null: What is the engineer's scale? A. $3.70 for 100 miles. For what is known as a short day, $3.50.

Whereupon the further hearing was continued to February 1, 1898, to be continued at the same place at the hour of 10 o'clock a. m. of said date.

10 a. m. February 1, A. D. 1898.

ONWARD BATES, a witness produced, sworn and examined on the part of the plaintiff, testified as follows:

Direct Examination by Mr. Peck.

Q. What position do you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. Engineer and superintendent of bridges and buildings.

Q. How long have you been in the service of the company? A. Ten years to-day, exactly.

Q. In what capacity? A. In the same capacity.

Q. What has been your business, prior to entering the service of the Chicago, Milwaukee and St. Paul Railway Company? A. I was civil engineer, bridges and structural work.

Q. Now, you may begin with your connection with engineering and structural work, and state what experience you have had in that kind of work? A. I commenced on the 1st day of March, 1865, as an apprentice in the Fulton Iron Works, of St. Louis, Missouri.

Q. After that, what were you doing? A. I was then draughtsman and inspector of iron work, on the St. Charles bridge, then for about a year and a half, foreman of the shop in which was constructed the caissons that went under the piers of the Eads bridge at St. Louis.

Q. Crossing the Mississippi? A. Yes, sir; crossing the Mississippi. Then for two years at the Renssalaer Polytechnic Institute, at Troy, New York; then for a number of years as assistant engineer and inspector for Colonel C. Shaler Smith, of St. Louis, consulting and contracting engineer, and for the Cincinnati Southern Railway, during its construction, and was with this company in 1877. I left them in March, 1878, and went to Australia, and was contracting with the Colonial governments there for a little over three years. I represented Colonel C. Shaler Smith and the Edge Moor Bridge Works, of Wilmington, Delaware, jointly.

Q. When did you return to this country? A. I returned in August, 1881, and was then engaged with Colonel Smith, and the Edge Moor Bridge Works on special work, during which I visited, for them, Europe and Canada. I had charge of the Minnesota and North-Western bridge, over the Mississippi river at St. Paul. I erected the superstructure of the St. Paul and Northern Pacific bridge at Minneapolis, and the last work that I did was the erection of the Santa Fe bridge, over the Missouri river at Sibley, Missouri. I left that position to take my present one, on the 1st day of February, 1888, and have been here ever since.

Q. Mr. Bates, are you a member of any organization of civil engineers, or other scientific men? A. I am a member of the British Institution of Civil Engineers, the American Society of Civil Engineers, the Engineers' Society of Western Pennsylvania, the Western Society of Engineers, the Western Railway Club, the American Academy of Political and Social Science, and of the American Association of Railway Superintendents of Bridges and Buildings. I hold an honorary degree of civil engineer from the University of Wisconsin.

Q. Mr. Bates, in your experience, in the experience you have related, as an engineer, building and mechanical engineer, and as superintendent of works, have you been called upon to perform other work, of a mechanical character? A. Yes, sir; my work has been altogether mechanical, and I began in that line, from the position of workman up, as you will observe by the record. Although I have been engaged principally in bridge building, I have had more or less to do with buildings. The principal building I had charge of before I came to this company, was the construction of the station at the New York end of the Brooklyn Bridge, which was built under my direction. In giving my record I neglected to state that two years of the time covered I was employed as president of the Pittsburgh Bridge Company—simply employed in that capacity, and one year I was mining in Mexico

Q. Are you acquainted with the use of carpenters' tools, used in buildings and repairs of buildings? A. Yes, sir; as a pattern maker I naturally became proficient. They use the same tools that carpenters do.

Q. Did you prepare for Mr. Whittemore, the chief engineer, the cost of the buildings of this company in South Dakota, which he embodied in his testimony? A. Yes, sir.

Q. What was the cost of the buildings in South Dakota, a statement of which you gave to Mr. Whittemore? A. $940,606.

Q. Is that a correct statement of the cost of the buildings in South Dakota—buildings and structures of the company in South Dakota? A. That is a correct statement of such buildings and structures as are recorded on my building list.

Q. Are there some buildings or structures of the company in South Dakota, of which you have not a record? A. Yes, sir.

Q. Were those buildings and structure included in your statement furnished to Mr. Whittemore? A. No, sir; I did not include anything except those which were recorded in my office.

Q. How did you arrive at the statement of the cost of the buildings and structures in South Dakota, which you furnished Mr. Whittemore for his testimony? A. I went over that in detail, with my assistant superintendent, who was formerly chief carpenter of the Southern Minnesota Division, our architect who makes the plans, and was supposed to be familiar with the cost of these structures, the chief clerk and his assistant, who kept the record of costs. and we placed the cost on each separate item of building.

Q. Buildings and structures of the company in South Dakota have been erected and constructed from time to time; I will ask you to state whether, in your opinion, it would cost the company more or less than the amount you have named to reproduce those buildings and structures? A. It would cost the company more than the aggregate of my statement.

Q. Are you able at this time to give an estimate of how much more? A. No, sir.

Cross-Examination by Mr. Null.

Q. Mr. Bates, have you prepared a detailed statement showing the item of $940,606? A Yes, sir.

Q. Have you such a statement with you? A. I have with me the statement which you asked for. The items, station by station.

Q. Mr. Bates, estimating the building at the City of Mitchell, $63,676, what items entered into that? A. We have the station buildings, platforms, planking, the round house,

the turntable, the items of water supply, the smaller shops, and besides, I think there is a machinery derrick and platform. I am not sure about that now. I cannot give all the details, but we took everything that we could find, and I suppose the gentleman understands what buildings are.

Mr. Peck: You had better explain that. A. I would like to explain pertaining to that estimate, that buildings include all structures that are charged to our accounts as buildings, and include everything on the road, except the roadbed and track and track signs and bridges. That includes the item of water supply, which is one of the heaviest items in this estimate. It brings in the cinder pits, clinker pits, the section tool houses, which are located at the stations, the out-houses, turn tables, all coal sheds and coaling apparatus. A great many items that would appear on our list, and would enter into that estimate, would not be observed by one visiting the station, unless he knew just where to look for them. That would apply to the piping that is buried under the ground. That estimate at Michell includes our steam heating apparatus as well.

Mr. Null: That is the round house? A. Yes, sir; and I think the steam is led to the platform, to heat the cars.

Q. I see on the second page of this estimate, Sioux City and Dakota division, twenty-four stations, $162,736, average $6,872; twenty-one stations, average, $4,397. Explain what that means? A. Well, I made that statement of average, because I thought you were under the impression that our stations were costing about $10,000 apiece, and in the first column of average, I divided the total cost of the stations, by the total number of stations. In the second column I left out those large stations, at division points, which would run up the average. You will see, I believe, that why I

omitted some was so as to give an average for country stations.

Q. Do you give the number here in this statement anywhere of what you call the standard stations? A. No, sir; I gave that to you, the total.

Q. It does not appear there? A. No, sir; I simply added them.

Q. What was the average cost of the standard stations? A. That is the list I gave you. I forget the exact number It was $2,500; that is the highest price station that enters in that list, outside of those at division points.

Q. $2,500, then, does not that present the average cost of the standard station? A. By the standard, we assume those stations which were built as a standard, when the roads were constructed, all of one kind. The other stations have cost less, because the standard stations are a long station, with dwelling rooms above the office, and since the construction of the road, we have built very few, if any.

Q. Then, taking the station, for instance, such as the one at Letcher, the first station north of Mitchell, on the James river line? A. I do not remember. That is probably one of those standard stations.

Q. Would you say that if it was a standard station, it would cost $2,500? A. Yes, sir.

Q. Could you furnish us with a diagram or plan of the standard station? A. I could if I was instructed to do so. I feel a little embarrassed as to what I can do. We can furnish complete plans if you desire.

Q. I would also like a detailed statement of the items charged to the Mitchell station, the Aberdeen station, the Sioux Falls station and the Wolsey station. (No answer.)

Q. I will ask you, Mr. Bates, if you have a statement, showing the items constituting the amounts charged to stations in this statement which you have produced here? A. Yes, sir; I have such a statement.

Q. Will you produce that statement? (No answer.)

February 1, 1898, 2 p. m.

ONWARD BATES, re-called for further examination, testified as follows:

Cross-Examination by Mr. Null.

Q. In estimating the cost of the stock yards, upon what basis do you estimate that cost? A. I took it at 7 cents a square foot.

Q. Seven cents a square foot of enclosure? A. Yes, sir; some of them; I varied that considerably, though. The large stock yards that would not apply to; it is only on the smaller ones.

Q. And it is not estimated upon the lineal feet of fence? A. No. I could not. With the records that I have, I could not tell you which stock yards are paved. The stock yards have either been paved or planked or graded, otherwise they would become so the stock could not stay in them.

Q. Do you know as a matter of fact whether any stock yards in South Dakota have been paved or planked? A. Not of my personal knowledge; our records do not show that.

Q. Does this 7 cents per square foot include paving or planking? A. Yes, it was assumed as an average to cover all yards, paved and unpaved.

Q. How many boards high is that fence usually built? A. I would have to answer those sort of questions from the plans I have; I do not have the plans here of those stock yards I would say it was about six boards high, I venture to say that, anybody else's opinion, however, is as good as mine, so far as the number of boards high is concerned.

Q. I assume that you had a standard and that you had that in your mind? A. The stock yards had been built from time to time; we have a present standard, but it would not apply to them; I have no plans of those stock yards.

Q. So that your judgment would be that it would be at least six boards high? A. Yes, sir.

Q. With a cap board? A. Well, I could not say about that.

Q. How far apart would the posts be? A. I could not answer that, but my judgment would be they would be about eight feet or six feet, six feet instead of eight, five foot four inches, three posts to the sixteen-foot board.

Q. I notice a uniform charge running through this statement of $75 per station for out-houses? A. Yes; I took that as a unit for station out houses and put them in at $75 each.

Q. You did that without any definite knowledge of this, of exactly what they did cost? A. I know what our station out-houses cost now, and I could give a pretty close guess as to the cost of an out-house when we build them as we do now; when we build them in our shops and ship them out. There is a great deal of uncertainty as to the cost of an out-house. It depends upon the cost of the house itself and the size of the hole you set it over, and that of course would cost something.

Q. Do you know, as a matter of fact, the dimensions of the out-houses in South Dakota? A. No, I do not.

Q. So this is not based upon an actual estimate of the houses actually on the line in South Dakota? A. I do know that the out-houses that were commonly built at the time I came here were more expensive than those that we now build. I feel sure I was within the inside figure when I took the item of $75 for an out house erected and in place.

Q. But the estimate of $75 is not based upon actual knowledge upon your part, as to the dimensions of those out-houses. A. No, sir.

Q. Is it not? A. No, sir; it is not.

Q. Upon what basis do you estimate the cost of station platforms? A. I took those at $1.35 per lineal foot of twelve-foot platform.

Q. And is your estimate based upon the actual measurement of the various stations platforms in South Dakota? A. Yes, sir; except that my measurement is the front platform. If you will look at that plan you will see there is considerable platform around the station building that I included in the cost of the building.

Q. So that you have included in the cost of the building the station platform other than the platform between the building and the main track? A. Yes, sir; that is, at the ends and rear of the buildings.

Q. That would go in with the building? A. Yes, sir.

Q. Of what material are those platforms constructed? A. They are all pine except in some cases where we have cinder platforms. I put it at $1 a running foot for cinder platforms.

Q. $1 a foot for cinder platforms? A. Yes, sir.

Q. What kind of planks are used in these platforms, that is, in reference to the dimensions of the plank? A. In the plank platforms it is usually two inches thick.

Q. And what width of plank is used? A. Eight inches wide is the commonest width, but we have no specifications as to width.

Q. What is necessary to the comple tion of a platform? A. Well, you will see, for example, on these plans it shows two-inch stuff, and on these raised platforms there are sills under the joists. You have a plank and joists and sills and the blocking.

Q. In making this estimate of $1.35 a foot for twelve-foot platform, what valuation do you place upon the lumber that went into the platforms? A. I do not remember now.

Q. Twelve feet wide is the uniform width of front platform, is it? A. That is the usual width, it is seldom the platforms are narrower; in many cases the platforms are wider than twelve feet.

Q. In making this estimate you knew of the width of the various platforms, did you, in South Dakota? A. I think almost without exception.

Q. This station for which you have produced plans and specifications, is what you call a standard station, is it? A. Yes; and that corresponds to the estimate of $2,500 given in those figures there, being the most expensive of stations at other than junction points.

Q. What is the dimensions of this station? A. Twenty-four feet wide and seventy feet long.

Q. And does it cost $2,500 to construct such a station at this time? A. Yes, sir; as near as I can estimate it, $2,500; I know of such stations having been built for $2,500 and even for more.

Q. I will ask you if you ever made an estimate from the plans and specificatins of this station within the last three

months applying the present market value of material? A. No.

Q. You have not. A. No.

Q. How long since you made such an estimate? A. I do not remember; it has been a good while since we have built such a station as that, in fact, I do not recall when we have built any on that plan. Not since the Kansas City line was completed.

Q. It is possible, is it not, that you have never actually made an estimate upon that plan? A. Not a detailed estimate figuring the cost prices of lumber, material, nails and so forth.

Q. I call your attention to your detailed statement here of a station at Elk Point which is indicated as being a station twenty-four by seventy feet, and ask you if that is the standard station as you have stated it here? A. No.

Q. Wherein is it different from the standard? A. It is one story high. I do not remember the price given for that.

Q. It is $2,100? A. $2,100.

Q. You were not in charge of the construction of buildings at the time of the construction of these lines in South Dakota, were you? A. No, sir.

Q. You have no personal knowledge of what those buildings cost at that time? A. No; with one exception; I noticed in looking up the records that the contractor was allowed $2,500 for one of those stations that he did not build.

Q. That is, there was $2,500 deducted from his pay for one station that he did not build? A. Yes, sir.

Q. I understand you to say that your relation with the company began in 1888? A. Yes, sir.

Q. At a time after all these lines in South Dakota were constructed? A. Yes, sir.

Q. I see an item here "C. and O. House," does that refer to coal and oil house? A. Yes, sir.

Q. What are the dimensions of those houses? A. As near as I can remember eight feet wide and sixteen feet long and about seven and one-half or eight feet high.

Q. Have they a door in them? A. Yes, sir; they have a door in the oil room and also a door in the coal room and they have windows to put the coal in; put the coal in the window from the car track.

Q. Have they floors in them? A. There is a floor in the oil room—no, the oil room has a sand floor as I remember it, and in the coal room they have a loose floor; it is intended that the floor shall lie on the ground and that the weight of the coal shall be carried direct to the ground underneath; just loose boards to fit in there.

Q. This coal and oil house is separate and apart from the station buildings? A. Yes, sir; they carry coal for station consumption, and for storage of switch lamps and oil; the switch lamps and oil are stored in them as a matter of precaution against fire.

Q. And they are constructed of pine lumber? A. Yes sir.

Q. Is there more than one thickness of boards on the walls? A. They vary; the walls of the coal house are of two inch lumber put inside of the studding so as to resist the pressure of the coal. The roof is a double thickness of boards and the whole building is painted.

Q. Do you know the actual dimensions of the coal and oil houses on the lines of South Dakota? A. I have a record of them.

Q. They were not constructed under your supervision? A. Yes, sir; they were.

Q. At what time were they constructed? A. At almost any period during the last five or six years.

Q. And did you prepare the plans and specifications for them? A. Yes, sir.

Q. So that this estimate of $100 is actual, is it? A. It is actual in this respect, that I have to assume the cost of placing them and setting them up. They are completed in the shop at Tomah and shipped out on cars.

Q. Let me ask you, Mr. Bates, if you know from your own personal knowledge the actual quantity of lumber contained in one of these coal and oil houses and what that lumber cost at the time of the construction of those buildings? A. No; I do not.

Q. You simply send your plans to the shop and they construct the buildings there? A. Yes; we know the cost of a building after it is constructed. Those have all been figured out, the coal and oil houses.

Q. You do not mean to say that the cost is just exactly $100? A. No; I might say anything, and it would be impossible to get the cost of the building within a dollar.

Q. When a small structure of this kind is completed at the shops, under your direction, do the men in charge of the shops report to you the material used and the expense in the construction of a small structure like that? A. It is all reported to our accounting department.

Q. To the auditor's department? A. To our road accountant.

Q. Is that a part of your department? A. No, sir.

Q. So that this report does not come back to your depart-

ment directly? A. The reports of labor and material go through my department to the road accountant, but I never pay any attention to these reports of cost except when I want to inform myself as to the cost of a building, and I have no need to know the cost of a structure except as a check on me to make the cost economical.

Q. You do not disburse the funds? A. No, the organization is very large; you understand the purchasing agent will have his charges, the general storekeeper will have his, and so on, and I have to gather up these items of cost and put them together when I want to know the cost of any particular structure.

Q. What is the dimensions of the water tanks? A. Our standard water tank is 16x24; that is, the staves are sixteen feet long and the tank is twenty-four feet in diameter.

Q. And what is the capacity? A. 50,000 gallons.

Q. How many barrels? A. I never could find out just what the number was; there are forty-one and one-half gallons, I believe, to the barrel, and that would make about 1,200 barrels.

Q. You do not estimate it according to the barrels? A. We never considered it by barrels.

Q. These water tanks were constructed and placed upon the lines in South Dakota prior to the time you took charge of this department, were they not? A. Yes; with possibly a few exceptions.

Q. And you do not know of your own knowledge the cost of those tanks? A. Not of those particular tanks; no, sir.

Q. What style of wind mill is in use? A. Most of those mills out there are the Eclipse Wind Mills.

Q. What size? A. I think the twenty-foot mill is the most common.

Q. They are uniform in size, are they? A. I think that there were some twenty-four foot mills, but I am not sure of that. We have had occasion to buy other sizes, in my time, we usually bought the twenty-foot mill.

Q. The mills are generally uniform? A. Yes; but there is one exception or two; there is one mill that I put up myself of a cheaper kind; I made an allowance for that.

Q. The Aer-Motor? A. Yes, sir; there is an Aer-Motor mentioned there.

Q. Do you know what the present cost of a twenty-foot Eclipse Mill is? A. I do not, we have not been using them recently.

Q. Neither do you know what the original cost of the Eclipse Mill was of your own knowledge? A. Well, no; but I looked it up and found out what it was.

Q. Where did you look it up? A. We could find that; we have old accounts which would show. My chief clerk would look up a thing of that sort and I would scarcely know where he got it.

Q. I show you a price list of Eclipse Mills and ask you to examine it and ascertain what the present market price is of a twenty-foot Eclipse Mill? A. I would have to go to the Eclipse people to find that; if there is a price list in here there would probably be a very large deduction or discount; you see they have a list price of $450; that does not include the tower; there is the cost of the tower and the erection and transportation that would be added to that.

Q. What height of tower do you use? A. The towers vary considerably; I think fifty or sixty feet would be an ordinary height.

Q. As a matter of fact, do you know the actual height of

towers in South Dakota? A. No; I took those wind mills at a uniform price of $650.

Q. That includes the tower? A. That includes the tower and it includes the wind mill pump, the whole thing erected.

Q. Do you know what the present cost of these water tanks are? A. We have a list of material and labor at $1,240 each; I put them in my list at $1,500.

Q. That is an estimate on your part? A. Yes, sir.

Q. Do you know when this list of labor and material was prepared or compiled? A. About two years ago. That was what we might call a private price; in the consideration of prices we only took in the labor and material expended, which, as any business man knows, is only a part of the cost of the structure.

Q. What style of hoops were used in these tanks? A. I am not sure about that; I think they were riveted hoops. We have more riveted hoops than with patent fasteners, I should say bolt fastenings.

Q. What dimension stuff is used in the staves for these tanks? A. They are known as three-inch staves, but the width is variable.

Q. What height of stand is used, about? A. About ten feet posts; the height of those tanks as a rule is determined by the spout to deliver the water into the tenders of the engine.

Q. You think about a ten foot stand? A. Yes, sir.

Q. Do you know what the cost of these stands are estimated at? A. No.

Q. Are you familiar with the tanks constructed by the Fairbanks-Morse Company? A. Not especially, because we build our own tanks. Since I have been here we have built all of our own tanks.

Q. I show you a catalogue and ask you to state the price of a tank as indicated there, 16x24, with riveted hoops? A. Price, with riveted hoops, $500; you understand there is a large discount on this, but at the same time it is proper to consider that the frost proofing adds very largely and I do not think that is counted there.

Q. The frost proofing for a twenty-four foot diameter tank is how much, as shown by this catalogue? A. That is a frost proof roof. It would seem that the addition would be $190 on the list price additional for the frost proof roof. This (referring to cut showing boxing under tank) ought to be frost proof. That is very expensive work; I think with our standard frost proofing, there are four different thicknesses of boards with air spacing between each one of them, and that is not included, I believe.

Q. What is the usual dimension of the tool houses? A. I cannot tell you; they take a hand-car and ordinary track tools; I do not remember now. Tool houses are small enough to be shipped on a flat car.

Q. I see a uniform charge of $65 for tool houses? A. Yes, sir.

Q. Do they refer to houses ordinarily used for housing hand-cars and section men's tools? A. Yes, sir.

Q. And you are unable to give the dimension? A. No; I do not know the exact dimension.

Q. I see in this statement that you have estimated the cost of the station at Sioux Falls at $13,000? A. Yes, sir.

Q. Was that building constructed under your supervision? A. Yes, sir.

Q. And did you prepare the plans and specifications? A. Yes, sir.

Q. And the freight house, $9,000, was that prepared under your supervision? A. Yes, sir.

Q. Now, in the construction of this station house, at Sioux Falls, did the reports of money expended come through your department? A. Yes, sir; part of them; I have the actual cost of part and I estimated a part.

Q. And this report, then, of $13,000, is supposed to represent the actual outlay, is it? A. Yes, sir.

Q. I will ask you if this Sioux Falls passenger station was not recorded to the auditor's department at $6,416.15? A. I do not know, but I should not be surprised if it was.

Q. I ask you if this freight station at Sioux Falls is not reported to the auditor's department at $5,697.50? A. I do not know, but I would not be surprised if that was true; I can explain why.

Mr. Null: I suppose your attorneys will give you an opportunity to make your explanation.

Mr. Peck: I supposed you wanted it, Mr. Null.

Mr. Null: I see the station house at Aberdeen, you have estimated the cost of that at $6,000? A. Yes, sir.

Q. Is that supposed to be the estimate of the actual cost of that structure? A. Yes, sir.

Q. Was the passenger station at Summit constructed under your supervision? A. Yes, sir.

Q. Do you remember what year? A. I think last year, perhaps, I am not sure.

Q. 1896? A. 1896; yes, sir.

Q. Is that a standard station? A. No.

Q. What difference is there between that and a standard station? A. That is much smaller; a one-story station.

Q. What is the dimension of that station? A. I do not remember; it is a small station.

Q. It is reported here as having cost $1,200? A. Yes, sir,

Q. And is not it reported to the auditor as having cost $975.78? A. I do not know what it is reported to the auditor at.

Q. I call your attention now to engine houses; do you know how many there are in South Dakota? A. I do not remember, but I gave you a list of them and the list is correct.

Q. What is the total capacity of the sixteen houses? A. It says eighty-five engines, does it not?

Q. Now, what material is the engine house at Mitchell constructed? A. Of brick with a slate roof.

Q. What material is used in the construction of the engine house at Aberdeen? A. The same.

Q. I notice in the items of the Aberdeen station, blacksmith shop, $600; office, $400; car repair shop, $500, and so forth, and I will ask you if those are located in the engine house? A. No; those are separate buildings; I got them off our building list.

Q. What is that? A. Those are separate buildings, I took them off the building list.

Q. They are not connected with the engine house? A. No.

Q. Are they in one building, the blacksmith shop and the two offices and the car repair shop? A. No; they are in separate buildings.

Q. Do you know when the first round house was constructed in Aberdeen? A. No; it was before my time.

Q. Do you know when the present structure was erected?

A. That was before my time.

Q. Do you know whether since it was originally con; structed there have been additions constructed? A. No- I do not.

Q. You began with the company in 1888? A. Yes, sir.

Q. And if there was any construction or any additions to the Aberdeen engine house during the year 1888 it was before you began work for the company, was it? A. It would not be likely, because I came on the 1st of February, 1888, but still it is possible that there might have been an addition built that I do not remember.

Q. If there had been any expenditure of $6,000 or $8,000 there you would have remembered it, would you not? A. Well, I might, and then I might not, because the expenditures of my department are considerably over $1,000,000 a year, and I could easily slip such an item from my memory.

Q. I call your attention to the station house at Harrisburg, which you have charged in at $1,050, and I ask you if you ever made an estimate from a personal knowledge of the building? A. No.

Q. You have no personal knowledge of the building or its dimensions? A. I do not remember the building at Harrisburg at this time.

Q. I call your attention to the item of turntables and the entries of cost are either $1,500 or $3,000? A. Yes.

Q. Explain the difference between a turntable costing $1,500 and a turntable costing $3,000? A. A turntable costing $1,500 is what we call the gallows-beam wooden turntable, and the $3,000 turntables are all iron or steel.

Q. And are operated by power? A. No.

Q. Are those turntables purchased or constructed by the company? A. The iron tables are purchased; the wood tables are constructed.

Q. Of whom are the iron tables purchased? A. We have turntables in South Dakota bought of the Key Stone Bridge Company; the Key Stone Bridge Company's make, and I think of the Edge Moor Bridge Company's make, and possibly others..

Q. And the two styles that you have mentioned are the ones in general use by the company, are they? A. Yes, sir.

Q. Over its system? A. Yes, sir.

Q. And they have no turntables costing materially more than $3,000, or any sum considerably less than $1,500? A. They have two or three turntables that cost more than $3,000, but the conditions were exceptional. The $1,500 turntable is the standard, and has been ever since I have been here; they have been built on the same pattern as existed when I came.

Q. I call your attention to a turn-table put in at Mitchell, South Dakota, in 1894, and ask you if you know the style of turntable? A. Well, I am surprised now, that there was one put in then. I do not remember that fact. I think that there is a Key Stone Bridge Company's turntable at Mitchell.

Q. Let me ask you then if it is not a fact, and you can look it up before answering it, if a new iron turntable was not put in at Mitchell during 1894, at a cost of $688.17? A. I will make a note of that, if you will permit me. We have been paying from $1,000 to $1,400, and even more for turntables on board cars in Chicago, and in some cases the pit is more expensive than the turntable itself, so that the

proposition would not be a reasonable one that we put in a new turn-table at such a price.

Q. I also call your attention to the purchase of a turn-table at Perry, Iowa, during the year 1890, for $2,171.96, and ask you to look that up at the same time. A.

Q. In the case of purchasing a new turntable to supply the place of one that was worn out, it would not necessarily involve the construction of a new pit? A. Not if you have got the same size of pit and the same style; that is to say, if you have got a table that will fit the old pit, you can simply put it in.

Q. So that this item at Mitchell, if such a transaction had taken place, would most likely represent the cost of the table on board cars at Chicago? A. No; I think it would represent the cost of a table that we would move from somewhere else, and that it was an arbitrary charge for second-hand material, the new station being charged and the old station credited; that is the only way I could account for that.

Q. I call your attention also to a turn-table at Milbank, erected during the year 1892, for $1,138.51? A. Yes, sir; I put that table in.

Q. Was that a new table? A. It was a new table.

Q. In what style? A. I suppose I would call that my own style; as I remember, I made the design and put a new style of center under it. I think the table was made from plans made in my office.

Q. It was a table constructed by the company, was it? A. No; we always buy the steel turntables from a bridge company.

Q. And then you have some improvement connected

with them? A. Yes; I make the plans in such a case and the bridge company manufactures the table from my plans and sells it to us on board cars, and then we have the expense of transportation and putting it in place and putting the floor on it.

Q. You think that in some instances turntables that have been in use at other points on the system have been placed on lines in South Dakota? A. From what you tell me I think such may have been the case at Mitchell, but of my personal knowledge I do not at this moment recall one.

Q. I notice that your account, you have given some water stations at points other than at waterst ations? A. Yes, sir.

Q. What constitutes one of those water stations? A. A tank and a mill or steam pump to fill it, and a well or reservoir from which to get the water with the necessary pipe and appurtenances.

Q. I call your attention to the statement of a water station three-fourths of a mile east of Parker, and is that station composed of a water tank and a wind mill? A. I think you will find it stated there. I do not recall the station from my memory. We have been at great expense in many places to get water and that is evidently one of them.

Q. And this water station at a point three-fourths of a mile east of Parker consists of a tank and mill, does it, and well and pump? A. Yes, sir; all those items that are there.

Q. And the total cost is represented here as being $1,500. A. I think that is to be accounted for as being what we call a temporary tank, probably.

Q. Is the temporary tank of different construction from the regular tank? A., We sometimes put up small tanks, either one or two to meet our exigencies.

Q. I call your attention to a water station one mile east of Yankton? A. That is a temporary water station.

Q. Which consists of a mill and small tank, does it? A. I think we had a steam pump there, but I don't remember now. I know we spent considerable money there; we had special trouble with water at Yankton and what ever estimate I made there will not begin to cover the expense we have been to. A good many cases of expenses have been wiped out so that there not being a matter of record, could not be covered in my estimate. The river has been very variable there and we have tried at various times to get water from the river.

Q. I call your attention to an entry in your record, one mile east of Yankton, water station, and ask you what that includes? A. Well, that is a very rough estimate made with the conviction that we had spent a great deal more than that. I do not know what there is at that station today; what that $500 represents.

Q. Well, if there is anything there it would be most likely to be a mill and tank, would it not, of some description? A. I think it was a steam pump and that the pump has been removed. No; I do not know how much has been taken away from there, but I have to make this from my record as near as I can. And I know, that is to say, I am perfectly convinced that we have spent much more than $500 there.

Q. Then if the pump has been removed, there is no active water station there at this time? A. Possibly not; of course, if there is no means of pumping water there is no water station there at this time.

Q. So that this $500 would simply represent whatever remains there of the station? A. Yes, sir; with the pipe and

that sort of thing. There is a great deal of pipe underground at those stations; more than I could get a record of, and I was furnished with a long list of abandoned wells that I have not included in my estimate.

Q. They would have no value at the present time? A. No; but if I had a record of them I would put them in because they were necessarily an expenditure in building our road and they were in the way of experiments.

Q. In the construction of fifty-seven water stations, for South Dakota, you would not expect to pay the list price for tanks and mills and pumps, would you? A. I would expect to pay at least the prices I have given there.

Q. But in the catalogues issued by the firms or companies who furnish such supplies, you would not expect to pay the full list price? A. No; there is a large discount on those list prices; there are also many items that have to be added together to make a complete tank. The fixtures will probably add $75 to the cost of the tank on board cars here.

Q. Do you know the total length of platform in South Dakota? A. Not the aggregate; I have not added them up.

Q. Can you state with any degree of certainty, the average length of platforms in connection with the standard station building. A. There is a great variation; they run from 160 feet, as a rule, upward. There are stations where the platform cost $400 or $500 at a station, and those are not at junction points either.

At Mitchell the turntable was transferred from West Milwaukee and I presume that the cost quoted must be intended for the alteration of the pit to take the West Milwaukee turntable. That would account for this low charge.

At Perry voucher was made in my office for an iron turn-

table, f. o..b. cars, Chicago, $1,145. This turntable replaced a wooden table and in addition to the charges in the auditor's office there should be added to get at the cost of a table, the value of the old pit.

At Milbank, voucher was made in my office for the iron work, f. o. b. cars at Chicago, $1,505.26. For the steel balls under the counter $40. To complete the cost of the turntable will require the cost of transportation to be added, the placing of the table, and the material and labor for a floor on the same; for latches, for levers, for construction of pit with pit walls, central foundation, foundation for the circular track and drainage of pit. I have those items of vouchers in my own records.

Re-direct Examination by Mr. Kittredge.

Q Inquiry was made of you by counsel for defendants regarding the reports to the auditor of the cost of Sioux Falls station; have you any explanation to make in regard to that matter? A. I cannot explain the auditor's accounts, but I assume that the other items must have gone to some other account. There was a large amount of grading. The station was built in a swamp, stands up high. There was a sewer to be put in there and there was a good deal of work around the platforms. Now, I will say of my own information to get at the cost of the structure, I have to take the cost of a certain part of the structure and I must hunt around and find where all of the different charges have gone to, the charges that are made by other departments, that is, of work that was done under the direction of the superintendent, or under the direction of the chief engineer, that I never get unless I ask for it specially. I should account in that manner for the discrepancy.

Q. The same is true in regard to the apparent discrepancy in counsel's statement regarding the Summit station? A. I think so. The road accountant very often has charges that even if they did not properly belong to the cost of buildings are incidental to the cost of buildings and would not be incurred by the company if the buildings were not erected.

Q. Since you made this report or statement to Mr. Whittemore, regarding the value of these structures that you have testified about, have you discovered other items that ought properly to be added to this account? A. Yes, sir; there is one item in particular at Milbank, amounting to $14,863, that I should have included in my statement to the chief engineer if I had known of it at the time. Our architect, who has charge of such matters, found between the time when I made the estimate to the chief engineer and the present estimate, these additional items of cost.

Whereupon the further taking of testimony was continued to February 2, A. D. 1898, to be resumed at the same place at the hour of 10 o'clock of said day.

February 2, 1898, 10 o'clock a. m.

Mr. Null: I offer in evidence Exhibits 26 and 27, as a part of the cross-examination of Onward Bates.

EXHIBIT 26. (Defendants.)

C., M. & St. P. Ry .....B. & B. Department, 1-31-98.

SUMMARY OF BUILDINGS AND STATIONS IN S. D., S. C. AND D. DIVISION.

McCook	$ 775 00	
Jefferson	1,660 00	
Elk Point	14,555 00	
4 miles north of E. P	2,200 00	
Burbank	1,930 00	
Vermillion	4,860 00	
Hinsey	275 00	
Meckling	4,915 00	
Gayville	4,390 00	
Yankton	17,320 00	
1 mile east of—	500 00	
Cement Works	200 00	
Utica	1,440 00	
Lesterville	6,810 00	
Tripp	9,540 00	
Parkston	5,640 00	
Etham	5,040 00	
1½ miles west of—	2,450 00	
Delmont	5,015 00	
Armour	12,540 00	
Hudson	7,390 00	
Fairview	2,050 00	
Harrisburg	1,635 00	
Sioux Falls	38,555 00	
Baltic	3,340 00	
Dell Rapid	7,290 00	
Trent	461 00	$162,776 00

7296

I. & D. DIVISION.

Canton	12,920 00	
Lennox	7,030 00	
Worthing	4,140 00	
Chancellor	760 00	
Parker	9,590 00	
¾ mile east of—	1,500 00	
Marrion Junction	9,620 00	
Dalton	50 00	
Bridgewater	7,330 00	
Emery	3,665 00	
Alexandria	7,530 00	
Burton	2,475 00	
Mt. Vernon	2,900 00	
Plankington	3,765 00	
White Lake	9,440 00	
Kimball	4,335 00	
Pukwana	3,925 00	
Chamberlain	20,910 00	
Freeman	4,690 00	
Menno	4,340 00	
Tuscan	2,300 00	
Scotland	9,365 00	
Tyndall	4,870 00	
Springfield	4,120 00	
Running Water	21,865 00	
Mitchell	63,676 00	$227,111 00

JAS. RIVER DIVISION.

Letcher	4,275 00	
Woonsocket	14,675 00	
Alpena	7,010 00	
Virgil	3,510 00	
Wolsey	9,420 00	
Bonilla	3,560 00	
Spotswood	250 00	
Tulare	8,090 00	
Redfield	5,410 00	
Ashton	11,260 00	
Mellette	7,290 00	
Duxbury	100 00	
Warner	3,770 00	
Westport	5,890 00	
Frederick	6,570 00	
Winship	100 00	
Mina	2,795 00	
Ipswich	7,530 00	
Roscoe	9,385 00	
Hosmer	4,230 00	
Hillsview	7,025 00	
Eureka	7,310 00	
Orient	9,980 00	
Faulkton	8,080 00	
Millard	4,240 00	
Loyalton	7,050 00	
Bowdle	9,330 00	
Aberdeen	73,022 00	$241,157 00

S. M. DIVISION.

Flandreau	$ 3,465 00	
Egan	19,320 00	
Coleman	4,110 00	
Wentworth	3,065 00	
Winfred	3,390 00	
Howard	11,455 00	
Vilas	2,200 00	
Roswell	3,370 00	
Artesian	3,805 00	
Forestburg	5,510 00	
Ramona	4,240 00	
Oldham	5,250 00	
Lake Preston	7,810 00	
Erwin	4,205 00	
Bryant	11,475 00	
Vienna	300 00	
Naples	4,225 00	
Elrod	7,095 00	
Garden City	4,250 00	
Bradley	6,780 00	
Lily	220 00	
Butler	4,250 00	
Madison	37,160 00	
		$156,950 00

H. & D. DIVISION.

Big Stone City	3,445 00	
Twin Brooks	1,365 00	
Marvin	3,885 00	
Summit	8,310 00	
Waubay	14,240 00	
Webster	6,250 00	
Bristol	19,565 00	
Andover	13,450 00	
Croton	4,190 00	
James	1,050 00	
Bath	5,135 00	
White Rock	5,060 00	
Pierpont	950 00	
Langford	6,040 00	
Spain	50 00	
Britton	3,870 00	
Newark	5,570 00	
Corona	1,535 00	
Wilmot	3,120 00	
Sisseton	3,465 00	
Milbank	42,067 00	$152,612 00
Total		$940,606 00

S. C. & D.	Div.	24	Stations	$162,776	Average	6,782.....	21 Stations	average	4,397 *
I. & D.	"	25	"	237,111	"	9,084.....	21 Stations	average	5,131 x
J. R.	"	28	"	241,157	"	8,613.....	26 Stations	average	5,902 O
S. M.	"	23	"	156,950	"	6,824.....	21 Stations	average	4,784 —
H. &. D.	"	21	"	152,612	"	7,267.....	18 Stations	average	4,307 P.
		121		$940,606		7,774....	107		4,968

* Omitting Elk Point, Yankton and Sioux Falls.
x Omitting Canton, Chamberlain, Running Water and Mitchell.
O Omitting Woonsocket and Aberdeen.
— Omitting Egan and Madison.
P Omitting Bristol, Andover and Milbank.

EXHIBIT 27. (Defendants.)

C., M. & ST. P. RY. B. & B. DEPT.

ESTIMATED COST OF BUILDINGS IN SOUTH DAKOTA.

S. C. & D. DIV. 1-29-98

McCook:		
Station, 16x25	675 00	
Platform..25′ plank	35 00	
" , 60′ cinder	45 00	
Mail crane	20 00	775 00
Jefferson:		
Station, 16x24	650 00	
Platform, 99′	135 00	
C. & O. House	100 00	
Outhouse	75 00	
Sec. Tool House	65 00	
Mail Crane	20 00	
Stock Yards with Shed & Water Supply	615 00	1,660 00
Elk Point:		
Station, 24x70	2,100 00	
C. & O. House	100 00	
Outhouse	75 00	
2 Tool Houses	130 00	
3 Stat. Eng. House	3,750 00	
Coal shed with derrick, trucks and buckets	1,800 00	
Stock Yards with sheds and wat. supply	1,200 00	
Water tank	1,500 00	

Wind Mill	650 00	
Pump house	250 00	
Pump & boiler	750 00	
Well	300 00	
Bridge & Bldg. Dept. Storehouse & office	1,250 00	
Cinder pit	200 00	
Bridge yard	500 00	14,555 00
4 Miles North of Elkpoint:		
Water station		2,200 00
Burbank:		
Station	1,250 00	
Platform	135 00	
Tool house	65 00	
Mail crane	20 00	
Stock Yards with shed and water supply	460 00	1,930 00
Vermillion:		
Station	2,500 00	
Platform	220 00	
C. & O. House	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yards with shed and water supply	1,600 00	
Coal storage shed	300 00	4,860 00
Hinsey:		
Platform	50 00	
Stock Yard	225 00	275 00

Meckling:		
Station	1,250 00	
Platform	200 00	
C. & O. House	100 00	
Outhouse	75 00	
Tool house	65 00	
Water tank	1,500 00	
Wind mill	650 00	
Drive wells	150 00	
Piping	75 00	
Stock Yards with shed and Wat. Sup. & scale	850 00	4,915 00
Gayville:		
Station	1,350 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	
C. & O. house	100 00	
Stock Yards, scale, shed & artesian well	2,600 00	4,390 00
One Mile East of Yankton:		
Water station		500 00
Yankton:		
Station	3,750 00	
Platform	400 00	
Drive well in Frt. house	75 00	
C. & O. house	100 00	
Outhouse	65 00	
2 tool houses	130 00	
Coal shed with derricks, buckets, etc	1,600 00	

Engine house	3,000 00	
Turntable	1,600 00	
Water tank	1,500 00	
Pump house	250 00	
Pump & boiler	750 00	
Ice house	350 00	
Road master's office	100 00	
Car repair shop	75 00	
Cinder pit	200 00	
Stock Yd. office	75 00	
Coal storage shed	300 00	
Wells & piping	1,000 00	
Stock Yds. with shed, and water supply	2,000 00	17,320 00
Cement Works:		
Stock Yards	200 00	200 00
Utica:		
Station	125 00	
Platform	195 00	
Mail crane	20 00	
Stock Yds. with sheds, artesian well	1,106 00	1,440 00
Lesterville:		
Station	2,500 00	
Platform	295 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Tank	1,500 00	
Wind mill	750 00	

Well	125 00	
Stock Yds., with sheds, scale & Wat. supply	1,400 00	6,810 00
Tripp:		
Station	2,500 00	
Platform	400 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Sec. dwelling	1,200 00	
Coal shed with derrick, etc	700 00	
Tank	1,500 00	
Wind mill	650 00	
Reservoir, piping & pump pit	1,500 00	
Stock Yards. with sheds & scale.	850 00	9,540 00
Parkston:		
Station	2,500 00	
Platform	350 00	
C. & O. house	100 00	
Outhouse	75 00	
"	50 00	
Tool house	65 00	
Sec. dwelling	1,200 00	
Stock Yds. with sheds and scale	1,300 00	5,640 00
Ethan:		
Station	2,500 00	
Platform	350 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Sec. dwelling	1,200 00	
Stock Yds., shed & scale	750 00	$5,040 00

1½ Mile W. of Ethan:		
Water station		2,450 00
Delmont:		
Station	2,500 00	
Platform	325 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Sec. dwelling	1,200 00	
Stock Yds. with sheds & scale	750 00	5,015 00
Armour:		
Station	2,500 00	
Platform	325 00	
Outhouse	75 00	
Tool house	65 00	
C. & O. house	100 00	
Sec. dwelling	1,200 00	
Tank	1,500 00	
W. mill	650 00	
Well	400 00	
Piping	75 00	
Turntable	1,500 00	
Cinder pit	200 00	
Engine house	1,350 00	
Engine coal shed	600 00	
Stock Yds. with sheds & scale & Wat. Sup.	2,000 00	12,540 00
Hudson:		
Station	1,500 00	
Platform	325 00	
C. & O. house	100 00	

Outhouse	75 00	
Tool house	65 00	
Engine coal shed, derricks, buckets, etc	1,400 00	
Tank	1,500 00	
Wind mill	650 00	
Piping	75 00	
Well	200 00	
Stock Yds., with shed, scale & Wat. Sup	1,500 00	7,390 00
Fairview:		
Station	1,500 00	
Platform	150 00	
Coal & oil house	100 00	
Stock Yds. with sheds & Wat. Sup.	300 00	2,050 00
Harrisburg:		
Station	1,050 00	
Platform	125 00	
Tool house	65 00	
Mail crane	20 00	
Stock Yds. with sheds	375 00	1,635 00
Sioux Falls:		
Station	13,000	
Freight house	9,000 00	
Platform	1,800 00	
C. & O. house	100 00	
Outhouse	75 00	
2 tool houses	130 00	
Coal sheds with derricks, buckets etc	2,600 00	
Water tank	1,500 00	

Pump house	200 00	
Wind mill	650 00	
Water pipes & sewers	250 00	
Track scale	1,000 00	
Hard coal shed	150 00	
Ice house	450 00	
Engine house	5,500 00	
Turntable	1,500 00	
Stock Yds	150 00	
Extra for grading	500 00	38,555 00
Baltic:		
Station	1,800 00	
Platform	200 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yards with shed, scale & water	1,100 00	3,340 00
Dell Rapids:		
Station	2,500 00	
Platform	400 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Tank	1,500 00	
Wind mill	650 00	
Pump house	250 00	
Piping	250 00	
Stock Yds. with sheds, pipes & scale	1,500 00	7,290 00

Trent:		
Station	125 00	
Platform	51 00	
Tool house	65 00	
Mail crane	20 00	
Stock Yds. with sheds	200 00	461 00

IOWA AND DAKOTA DIVISION.

Canton:		
Station	$1,875 00	
Platform (both divisions)	850 00	
C. & O. house	100 00	
Outhouse	75 00	
3 tool houses	195 00	
Coal sheds with cranes, buckets, cars, &c	2,700 00	
Freight house	1,200 00	
2 pump houses	500 00	
Tank	1,500 00	
Wind mill	650 00	
Pump and boiler	700 00	
Stand pipe	375 00	
Piping	700 00	
Stock Yards with shed, scale & water	1,500 00	12,920 00
Lennox:		
Station	2,500 00	
Platform	390 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	

Tank	1,500 00	
Wind mill	650 00	
Well	200 00	
Coal house	200 00	
Stock Yards with shed, scale & water	1,350 00	7,030 00
Worthing:		
Station	2,500 00	
Platform	200 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard with shed & water	1,200 00	4,140 00
Chancellor:		
Station	200 00	
Platform	100 00	
Stock Yard shed	460 00	760 00
¾ Mile East of Parker:		
Water station	1,500 00	1,500 00
Parker:		
Station	2,500 00	
Platform	435 00	
C. & O. house	100 00	
Outhouse	75 00	
2 tool houses	130 00	
Tank	1,500 00	
Wind mill	650 00	
Pump & boiler	700 00	
Pump house	250 00	
Pipe line	1,500 00	

Stock Yds., with shed, scale & water	1,750 00	9,590 00
Marion Junction:		
Station	2,500 00	
Platform	380 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Engine house	3,000 00	
Coal shed, derricks, buckets, cars, etc	2,700 00	
Stock Yds., with shed, scale & water	800 00	9,620 00
Dolton:		
Platform	50 00	50 00
Bridgewater:		
Station	2,500 00	
Platform	200 00	
C. & O. house	100 00	
Outhouse	75 00	
2 tool houses	130 00	
Tank	1,500 00	
Windmill	650 00	
Well	600 00	
Piping	75 00	
Stock Yds., shed, scale & water	1,500 00	7,330 00
Emery:		
Station	2,500 00	
Platform	220 00	
C. & O. house	100 00	

Outhouse	75 00	
Stock Yard,shed & water	770 00	3,665 00
Alexandria:		
Station	2,500 00	
Platform	300 00	
C. & O. house	100 00	
Outhouse	75 00	
2 tool houses	130 00	
Sec. dwelling house	900 00	
Tank	1,500 00	
Wind mill	650 00	
Well	100 00	
Piping	75 00	
Stock Yards with shed, scale & water	1,200	7,530 00
Burton:		
Station	1,750 00	
Platform	200 00	
C. & O. house	100 00	
Outhouse	75 00	
Stock Yds. with water	350 00	2,475 00
Mt. Vernon:		
Station	1,750 00	
Platform	210 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yards with shed & scale	700 00	2,900 00
Plankinton:		
Station	2,500 00	
Platform	275 00	

Stock Yards with shed and water	750 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	3,765 00
White Lake:		
Station	2,500 00	
Platform	300 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Coal shed with crane, buckets, trucks, etc	2,000 00	
Coal storage shed	500 00	
Tank	1,500 00	
Wind mill	650 00	
Well	200 00	
Stock Yards with shed and scale	650 00	
Section dwelling	900 00	9,440 00
Kimball:		
Station	2,500 00	
Platform	245 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard with shed & scale	1,350 00	4,335 00
Pukwana:		
Station	2,500 00	
Platform	245 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	

Coal storage shed	340 00	
Stock Yard with shed & water	600 00	3,925 00
Chamberlain:		
Station	2,500 00	
Platform	220 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
2 warehouses	5,400 00	
Coal shed, with crane, buckets, &c.	1,800 00	
Engine house	3,000 00	
Turn table	1,500 00	
Tank	1,500 00	
Pump & boiler	800 00	
Pump house	250 00	
Piping	375 00	
Coal storage shed	350 00	
Car repair shop	100 00	
Sidewalks	375 00	
Stock Yards on both sides river	2,500 00	20,910 00
Freeman:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	
Section dwelling	900 00	
Stock Yard, shed, scale & water	950 00	4,690 00
Menno:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	

Tool house	65 00	
Coal storage shed	300 00	
Stock yard, shed, scale & water	1,200 00	4,340 00
Tuscan:		
Water tank	1,500 00	
Wind mill	650 00	
Well	150 00	2,300 00
Scotland:		
Station	2,500 00	
Platform	580 00	
Outhouse	75 00	
4 tool houses	260 00	
Coal shed with derrick, buckets, &c	2,700 00	
Coal storage shed	300 00	
Cinder pit	200 00	
Track scale	1,000 00	
Stock Yard, shed, scale & water.	1,750 00	9,365 00
Tyndall:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	180 00	
Stock Yard with shed, scale & water	1,850 00	4,870 00
Springfield:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	

Coal storage shed	180 00	
Stock Yard, shed & water	1,100 00	4,120 00
Running Water:		
Station	2,700 00	
Platform	300 00	
Outhouse	75 00	
Tool house	65 00	
Warehouse	2,700 00	
Ice house	375 00	
Coal shed with derrick, buckets, etc	1,600 00	
Engine house	8,000 00	
Turntable	1,500 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	300 00	
Pump & boiler	700 00	
Pump house	250 00	
Piping	200 00	
Stock Yard, scale & water	950 00	21,865 00
Mitchell:		
Station	2,600 00	
Platform planking & sidewalks	1,200 00	
Freight house	1,500 00	
Coal & oil house	100 00	
Outhouse	81 00	
3 tool houses	195 00	
Engine house	28,000 00	
Engines, boilers & machinery	10,000 00	
Turntable	3,000 00	
Coal sheds, cranes, buckets, etc.	3,000 00	
Tank	1,500 00	
Pump house	300 00	

Pump	500 00	
Well	600 00	
Piping	1,800 00	
Track scale	1,000 00	
Oil house	600 00	
Blacksmith shop	300 00	
Car repair shop	400 00	
Coal house	100 00	
Outhouse	200 00	
Roadmaster's office	100 00	
Coal storage shed	350 00	
Ice house	1,000 00	
Machinery, derrick & platform	600 00	
Tool house	150 00	
Steam heating	2,500 00	
Cinder pits	300 00	
Stock Yards, shed, scale & water	1,700 00	63,676 00

JAMES RIVER DIV.

Letcher:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	540 00	
Grain house	400 00	
Stock Yard with shed	475 00	4,275 00
Woonsocket:		
Station	2,500 00	
Platform	435 00	
Outhouse	75 00	

2 tool houses	130 00	
1 tool house	75 00	
Car Rep. shop	100 00	
Ice house	300 00	
Coal storage house	960 00	
Coal shed, derrick, buckets, etc.	1,800 00	
Engine house	4,500 00	
Water tank	1,500	
Wind mill	650 00	
Well	750 00	
Stock Yds., shed, scale & water supply	900 00	14,675 00
Alpena:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	400 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	800 00	
Stock Yd. shed, scale, & water supply	800 00	7,010 00
Virgil:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Sec. tool house	65 00	
Coal storage shed	400 00	
Stock Yd	250 00	3,510 00

Wolsey:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage house	960 00	
Coal shed, derrick, etc	1,800 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	500 00	
Stock Yard	600 00	
Machinery platform	550 00	9,420 00
Bonilla:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	450 00	
Stock Yard	250 00	3,560 00
Spottswood		250 00
Tulare:		
Station	2,500 00	
Platform	300 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	450 00	
Engine coal shed	1,800 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	350 00	
Stock Yard	400 00	8,090 00

Redfield:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	960 00	
Warehouse	990 00	
Stock Yard with shed and water.	600 00	5,410 00
Ashton:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Warehouse	990 00	
Coal shed, with derrick, buckets, &c.	3,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Machinery platform	260 00	
Stock yard	250 00	
Artesian well and piping	1,500 00	
Water supply at river	250 00	11,260 00
Millette:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage house	660 00	
Water tank	1,500 00	
Wind mill	650 00	
Well and piping	1,020 00	

Machinery platform	175 00	
Stock Yard, shed, scale	425 00	7,290 00
Duxbury:		
Platform		100 00
Warner:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage	660 00	
Stock Yard, with sheds	250 00	3,770 00
Westport:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage	400 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	300 00	
Stock Yard	200 00	5,890 00
Frederick:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Coal storage shed	960 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	300 00	
Stock Yard	300 00	6,570 00

Winship		100 00
Mina:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	2,795 00
Ipswich:		
Station	2,500 00	
Platform	325 00	
Outhouse	75 00	
2 tool houses	130 00	
Coal shed, derricks, buckets, &c.	1,500 00	
Water tank	1,500 00	
Wind mill	650 00	
Stock Yard, scale, & wat. supply	550 00	
Well	300 00	7,530 00
Roscoe:		
Station	2,500 00	
Platform	420 00	
Outhouse	75 00	
2 tool houses	130 00	
Section outhouse	60 00	
Engine coal shed, derricks, &c	1,800 00	
Engine house	1,500 00	
Turntable	1,500 00	
Sec. dwelling	1,000 00	
Stock Yards	400 00	9,385 00
Hosmer:		
Station	2,500 00	
Platform	330 00	
Outhouse	75 00	

Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Stock Yard	200 00	4,230 00
Hillsview:		
Station	2,500 00	
Platform	375 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	600 00	
Stock yard	200 00	7,025 00
Eureka:		
Station	2,500 00	
Platform	360 00	
Outhouse	75 00	
Sec. tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Machinery, derrick & platform	670 00	
Turntable	1,500 00	
Stock Yard, shed, scale, & water supply	1,100 00	7,310 00
Orient:		
Station	2,500 00	
Platform	330 00	
Outhouse	75 00	
Tool house	65 00	

Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Coal shed, derrick & buckets, &c.	3,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	600 00	
Stock Yard	200 00	9,980 00
Faulkton:		
Station	2,500 00	
Platform	370 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Machinery platform	260 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	450 00	
Piping	950 00	
Stock Yard	200 00	8,080 00
Millard:		
Station	2,500 00	
Platform	340 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Stock Yard	200 00	4,240 00
Loyalton:		
Station	2,500 00	
Platform	350 00	

Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	550 00	
Piping	100 00	
Stock Yard	200 00	7,050 00
Bowdle:		
Station	2,500 00	
Platform	350 00	
Outhouse	75 00	
Sec. tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	450 00	
Piping	30 00	
Turntable	1,500 00	
Stock Yards, shed, scales, & Wat. supply	1,150 00	9,330 00
Aberdeen:		
Station, passenger	6,000 00	
Platform and planking	2,000 00	
Freight house	2,200 00	
C. & O. house	100 00	
Outhouse	75 00	
4 tool houses	260 00	
Coal shed	3,000 00	
Engine house	30,000 00	

Turntable	3,000 00	
Machinery, derr'k & platform	1,000 00	
Track scales	1,000 00	
Boiler & sand house equipped	5,800 00	
Blacksmith shop, equipped	500 00	
Office	400 00	
Office	400 00	
Car repair shop	500 00	
Hard coal house	100 00	
Lamp house	150 00	
Ice house	800 00	
Ice house	1,200 00	
Line repairer's house	100 00	
Artesian well	2,700 00	
Other wells	2,000 00	
2 tanks	3,000 00	
Pump house	300 00	
3 Knowles pumps & boilers	2,400 00	
Piping	437 00	
Stock Yards	1,100 00	
Steam heating	2,000 00	
Cinder pits	500 00	73,022 00
		$241,157 00

SOUTHERN MINNESOTA DIVISION.

Flandreau:

Station	2,250 00	
Platform	275 00	
C. & O. house	100 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard shed & scales	700 00	3,465 00

Egan:		
Station	2,500 00	
Platform	730 00	
Outhouse	75 00	
Tool house	65 00	
Car repair house	200 00	
Sand house	200 00	
Coal house	100 00	
Ice house	400 00	
Transfer platform	200 00	
Engine coal shed	2,700 00	
Engine house	6,000 00	
Turntable	1,500 00	
Track scale	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	250 00	
Steam pump	700 00	
Pump house	250 00	
Stock Yard and shed	300 00	19,320 00
Coleman:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Drilled & test wells	800 00	
Stock Yards with shed	450 00	4,110 00
Wentworth:		
Station	2,500 00	
Platform	225 00	
Outhouse	75 00	

Tool house	65 00	
Stock Yard	200 00	3,065 00
Winfred:		
Station	2,500 00	
Platform	250 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard, shed, scales & Wat. supply	500 00	3,390 00
Howard:		
Station	2,500 00	
Platform	350 00	
Outhouse	75 00	
2 tool houses	130 00	
Engine coal shed	2,700 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	400 00	
Piping	1,350 00	
Artesian well	1,000 00	
Stock Yards, with shed & scales	800 00	11,455 00
Vilas:		
Station	1,800 00	
Platform	275 00	
Outhouse	75 00	
Stock chute	50 00	2,200 00
Roswell:		
Station	2,500 00	
Platform	225 00	
Outhouse	75 00	

Mail crane	20 00	
Stock Yard, shed & scales	550 00	3,370 00
Artesian:		
Station	2,500 00	
Platform	390 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard, scale, Wat. supply	525 00	
Artesian well	250 00	3,805 00
Forestburg:		
Station	2,500 00	
Platform	220 00	
Outhouse	75 00	
Tool house	65 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	300 00	
Stock Yard	200 00	5,510 00
Ramona:		
Station	2,500 00	
Platform	340 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Section dwelling	1,000 00	
Stock Yard	200 00	4,240 00
Oldham:		
Station	2,500 00	
Platform	350 00	
Outhouse	75 00	
Sec. outhouse	60 00	

Sec. dwelling	1,000 00	
Tool house	65 00	
Well	1,000 00	
Stock Yards	200 00	5,250 00
Lake Preston:		
Station	2,500 00	
Platform	360 00	
Outhouse	75 00	
Sec. tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Machinery platform	200 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	450 00	
Piping	50 00	
Drilled well	700 00	
Stock Yard	200 00	7,810 00
Erwin:		
Station	2,500 00	
Platform	305 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Stock Yard	200 00	4,205 00
Bryant:		
Station	2,500 00	
Platform	400 00	
Outhouse	75 00	
Tool house	65 00	

Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Engine coal shed, derricks, &c	2,700 00	
Turntable	1,500 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	400 00	
Piping	150 00	
Stock Yard with scale & Wat. supply	475 00	11,475 00
Vienna:		
Station	150 00	
Platform	50 00	
Frt. ofs	100 00	300 00
Naples:		
Station	2,500 00	
Platform	325 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Stock Yard	200 00	4,225 00
Elrod:		
Station	2,500 00	
Platform	245 00	
Outhouse	75 00	
Sec. tool house	65 00	
Sec outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	

Well	500 00	
Piping	300 00	
Stock Yard	200 00	7,095 00
Garden City:		
Station	2,500 00	
Platform	350 00	
Outhouse	75 00	
Sec. tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling house	1,000 00	
Stock Yard	200 00	4,250 00
Bradley:		
Station	2,500 00	
Platform	305 00	
Outhouse	75 00	
Tool house	65 00	
Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Wind mill	650 00	
Well & piping	425 00	
Stock Yard	200 00	6,780 00
Lily:		
Station	150 00	
Platform	50 00	
Mail crane	20 00	220 00
Butler:		
Station	2,500 00	
Platform	350 00	
Outhouse	75 00	
Tool house	65 00	

Sec. outhouse	60 00	
Sec. dwelling	1,000 00	
Stock Yard	200 00	4,250 00
Madison:		
Station	3,300 00	
Platform	550 00	
C. & O. house, outhouse, & 2 Sec. tool houses	310 00	
Car repairer's house	75 00	
Pump house	100 00	
Lineman's house	150 00	
Car house	75 00	
Round house, supply	100 00	
Sand house	100 00	
Round house outhouse	100 00	
Coal shed	2,500 00	
Engine house, 10 stalls	19,000 00	
Turntable	3,000 00	
Machinery platform	500 00	
Oil house	450 00	
2 tanks, 2 W. mills, & stm. pump	4,500 00	
Piping	600 00	
Stock Yard, scale, &c	900 00	
Clinker pit	850 00	37,160 00
		$156,950 00

HASTINGS & DAKOTA DIVISION.

Big Stone City:		
Station	2,250 00	
Platform	290 00	
Outhouse	75 00	

Coal storage shed	480 00	
Stock Yards	350 00	3,445 00
Twin Brooks:		
Station	1,000 00	
Platform	100 00	
Tool house	65 00	
Stock Yard	200 00	1,365 00
Marvin:		
Station	150 00	
Sec. tool house	65 00	
Sec. dwelling	900 00	
Platform	100 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	300 00	
Piping	220 00	3,885 00
Summit:		
Station	1,200 00	
Platform	75 00	
Outhouse	75 00	
4 tool houses	260 00	
Sec. dwelling house	1,000 00	
Turntable	3,000 00	
Coal shed	2,000 00	
Stock Yards	200 00	
Old well	500 00	8,310 00
Waubay:		
Station	2,500 00	
Platform	500 00	
C. & O. house	500 00	
Outhouse	75 00	

Sec. tool house	65 00	
Boarding house	275 00	
Engine coal shed, derrick, &c	3,000 00	
2 water tanks	3,000 00	
Wind mill	650 00	
Steam pump & boiler	700 00	
Well	350 00	
Piping	225 00	
Turntable	1,500 00	
Cinder pit	250 00	
Stock Yard	800 00	
Pump house	250 00	14,240 00
Webster:		
Station	2,500 00	
Platform	395 00	
Outhouse	75 00	
C. & O. house	100 00	
Sec. tool house	65 00	
Sec. tool house	65 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	700 00	
Stock Yards	200 00	6,250 00
Bristol:		
Station	2,500 00	
Platform	510 00	
Coal shed, derrick, buckets, &c	3,000 00	
Engine house	4,500 00	
Water tank	1,500 00	
Steam pump	700 00	
Oil house	100 00	
Ro. house outhouse	75 00	

Outhouse	75 00	
C. & O. house	100 00	
2 tool houses	130 00	
Coal storage shed	500 00	
Well & piping	5,675 00	
Stock yards	200 00	19,565 00
Andover:		
Station	2,500 00	
Platform	450 00	
C. & O. house	100 00	
Outhouse	75 00	
2 tool houses	130 00	
Coal shed, derricks, &c	2,400 00	
Engine house	3,000 00	
Coal storage house	960 00	
Car repair house	75 00	
Boarding house	250 00	
Hard coal house	60 00	
Water tank	1,500 00	
Wind mill	650 00	
Well	850 00	
Piping	50 00	
Stock Yard & shed	400 00	13,450 00
Groton:		
Station	2,500 00	
Platform	325 00	
Outhouse	75 00	
Tool house	65 00	
Machinery, derrick & platform	850 00	
Stock Yard	375 00	4,190 00

James:		
Station	1,000 00	
Platform	50 00	1,050 00
Bath:		
Station	2,500 00	
Platform	300 00	
Outhouse	75 00	
Loading platform	60 00	
Water tank	1,500 00	
Steam pump	700 00	5,135 00
White Rock:		
Station	250 00	
Platform	150 00	
Outhouse	60 00	
Sec. dwelling	1,000 00	
Water tank	1,500 00	
Aermotor	350 00	
Well	250 00	
Turntable	1,500 00	5,060 00
Pierpont:		
Station	600 00	
Platform	150 00	
Stock Yard	200 00	950 00
Langford:		
Station	2,250 00	
Platform	175 00	
Outhouse	75 00	
Tool house	65 00	
Sec. Dwelling	800 00	
Water tank	1,500 00	
Windmill	650 00	

Well	225 00	
Stock Yards	300 00	6,040 00
Spain:		50 00
Britton:		
Station	2,250 00	
Platform	180 00	
Outhouse	75 00	
Tool house	65 00	
Sec. dwelling	800 00	
Machinery platform	150 00	
Stock Yard, with shed	350 00	3,870 00
Newark:		
Station	2,250 00	
Platform	180 00	
Outhouse	75 00	
Tool house	65 00	
Water tank	1,500 00	
Windmill	650 00	
Well	450 00	
Stock Yard, shed and scale	400 00	5,570 00
Corona:		
Station	1,000 00	
Platform	235 00	
Coal storage house	300 00	1,535 00
Wilmot:		
Station	2,500 00	
Platform	200 00	
Outhouse	75 00	
Tool house	65 00	
Stock Yard	280 00	3,120 00

Sisseton:		
Station	1,800 00	
Platform	100 00	
Tool house	65 00	
Turntable	1,500 00	3,465 00
Milbank:		
Station, Pass. station	2,250 00	
Platform	450 00	
Freight house	900 00	
C. & O. house	100 00	
3 outhouses	225 00	
3 tool houses	195 00	
2 section dwellings	1,600 00	
Coal shed, with derricks, &c	2,700 00	
Engine house	32,000 00	
Turntable	3,000 00	
Track scale	1,000 00	
Water tank	1,500 00	
Steam pump	1,000 00	
Standpipe	350 00	
Boiler house	400 00	
Sand house	150 00	
Oil house	200 00	
Carpenter shop	250 00	
Ice house	400 00	
Boarding house	200 00	
Coal shed for heating boiler	100 00	
Coal shed storage	660 00	
Cinder pit	300 00	
Stock Yard, shed & water supply	1,000 00	
Piping	4,000 00	

Reservoir.....	2,000 00	56,930 00
		$167,475 00
Excess over previous estimate, due to ommissions in that estimate		14,863 00
		$152,612 00

Adjourned to 2 p. m.

A. E. MANCHESTER, called as a witness on behalf of the complainant, having been first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. What position do you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. Assistant superintendent of motive power.

Q. What are the duties of the position you occupy? A. In conjunction with the superintendent of motive power I have full charge of maintenance, repairs and construction of rolling stock.

Q. Who is the superintendent of motive power? A. Mr. J. N. Barr.

Q. Where is he at present? A. He is confined to his bed at home with typhoid fever.

Q. State what position you first occupied in the railway service, and what positions you have occupied, and how long an experience you had had in railway service, and particularly in the mechanical department? A. I commenced in the fall of 1864 as a machinist for the Milwaukee and La Crosse Railway Company, which is now a part of the Chicago, Milwaukee and St. Paul Railway system, at Portage, Wisconsin. I remained in that service for three years. I then went to Minneapolis, and went into the service in the shops there as a machinist, which was then the Minnesota Central, and had just at that time been acquired as a part of the present Chicago, Milwaukee and St. Paul Railway system, so that I was practically in their employ still, when I went to Minneapolis. In the fall of 1869 I was sent to Chalmers, Iowa, and promoted to the position of round house foreman,

which position I occupied until January 1, 1880, at which time I was transferred to Mason City, Iowa, as round house foreman. I filled that position until about January 1, 1887. Was then made general foreman of the Iowa and Dakota division, in April, 1889, I was promoted to the position of master mechanic of the Southern District, which constituted the Chicago and Council Bluffs Division, from Savanna to Council Bluffs, the Kansas City and Dubuque Division, and the Racine and South-west Division in Iowa. I filled that position until March, 1893, when I was promoted to the position I now occupy, assistant superintendent of motive power.

Q. During the illness of Mr. Barr you perform the duties which otherwise would be performed by him, do you not? A. I do.

Q. The jurisdiction of Mr. Barr and your own jurisdiction, do they extend over the entire system? A. Yes, sir; they do.

Q. Are you acquainted with the Chicago, Milwaukee and St. Paul Railway system, and are you acquainted with the lines of that system in South Dakota? A. I am.

Q. For what purpose does a railway company have and maintain shops, shop facilities, machinery and mechanic's tools? A. For the purpose of building and repairing and altering rolling stock, track materials and supplies bridge and building department materials and supplies, and materials and supplies used in the transportation department.

Q. Does the Chicago, Milwaukee and St. Paul Railway system own and maintain such shops and shop facilities? A. It does.

Q. Do the South Dakota lines receive the benefit of all

the shops and shop facilities of the system the same as any other portion of the system? A. They do.

Q. Can you state the cost to the company of the shops, shop facilities, shop tools and machinery located outside of South Dakota, and owned and used by the St. Paul Company in the operation of its lines?

Mr. Null: Objected to as immaterial.

A. I can.

Q. State what is the aggregate cost of the shops, shop facilities, machinery and shop tools used in and about the manufacture and repair of rolling stock and other things that you have mentioned.

Mr. Null: Objected to as immaterial.

A. $2,450,000.

Q. Are the shops, shop tools and machinery and the shop facilities of the Chicago, Milwaukee and St. Paul Railway Company necessary to the operation of the lines of the company? A. They are.

Q. Have they been judiciously located and have they cost and are they worth the sum you have mentioned. A. My judgment is that they are judiciously located; that they are worth as much or more than they are here quoted.

Q. Are the shops, facilities, machinery and tools connected therewith, which you have mentioned necessary—Do the lines of the company in South Dakota receive a share of all the benefits that are derived from the shops, machinery and tools connected therewith which you have mentioned? A. They do.

Q. Is some portion or proportion of the shops, facilities, machinery and tools you have mentioned made necessary by the fact that the company owns and operates about 1,100

miles of railroad in South Dakota? A. Increased size and increased number of tools are made necessary by the additional 1,100 miles of railroad in South Dakota.

Q. What proportion of the cost of the shops, tools and machinery and shop facilities you have mentioned are necessary to enable the company to maintain the equipment which is used in South Dakota, and to manufacture such parts of the equipment as are manufactured for South Dakota; what proportion? A. The mileage in South Dakota is about eighteen per cent. of the entire mileage of the system. This proportion of the value of the shops would amount to $450,000—$441,000, and is no larger or if as large as would be required for the 1,100 miles of railroad in South Dakota should those lines enjoy all the benefits and privileges that they now enjoy by being a part of the Chicago, Milwaukee and St. Paul Railway system. Were they to have important shops of equal facilities of their own, the percentage of rolling stock used and necessary for the operation of the business of the company in South Dakota is eight per cent. Was this proportion of the entire value of the stock taken, it would give to South Dakota as their share of the shops, $196,000. This is very much below for several reasons. The engines in South Dakota deteriorate much faster and have to go to the shops for repairs and for more extensive repairs oftener than the engines on any other portion of the Chicago, Milwaukee and St. Paul Railway system except, possibly, North Dakota, I would say at least thirty-three per cent greater is the cost of repairs of engines in South Dakota, than the average of the system. Cars also require a greater amount of repairs, on accountof service in South Dakota, for several reasons,—on account of the high and prevailing winds and the dust and the usual

prevailing dryness of the country. One of the reasons for the locomotives costing so much more when operated in South Dakota, is the condition of the water in South Dakota. It carries a large percentage of encrusting materials and alkali. These encrusting materials form onto and make a thick scale over and around the flues and the fire-box sheet and the boiler sheet, keeping the water away from the sheets that come in contact with the fire, thus preventing the water from protecting and preserving the sheet, causing the action of the fire on those unprotected sheets and flues to burn and crack them, and cause them to leak. The alkali has a tendency to make the boiler foam. In foaming water the suds is carried over into the steam chest, and carrying with it a quantity of grit. This creates undue friction in these parts and undue wear, necessitating frequent and increased repairs. It also creates a friction that acts as a brake on the engine to a certain extent in the performance of its work as an engine. Also the wind and dust and extreme dry weather, as already mentioned, wear more rapidly on the running and revolving parts of the engine than would be the case in a country where there is more moisture and less dust.

Taking all these facts into consideration, it is evident that the proportion of the value of shops that is directly chargeable and necessary to maintain the equipment and operation of the lines in South Dakota on an equipment basis is too low. My judgment is that about twelve per cent. of the cost of all the shops, facilities, tools, machinery, etc., of the system is made necessary or is used and required for the maintenance of the work done for the different departments, and the rolling stock used in South Dakota. If twelve per cent be taken as the basis, the amount to be charged to South Dakota as its proportion would be $294,000.

Q. State whether or not the South Dakota lines, by reason of having the use and benefit of the general shops and shop facilities you have mentioned, secure all these necessary repairs of equipment more cheaply and more economically than if they were separated from the system and had shops and facilities of equal efficiency in that state? A. They do.

Q. Are you able to state what, in your opinion, it would cost to supply the South Dakota lines with shops, machinery, tools and shop facilities of their own, with the necessary supplies to give them the same benefit as they now enjoy in these things, as a part of the system? A. I am of the opinion that a full and complete shop, one that is capable of manufacturing and repairing as cheaply as can the present shops of the system if located in South Dakota, could not be built or could not be placed there with the complement of stock, machinery, patterns, etc., necessary, for a sum much less than $800,000, if they were equally as efficient as the present shops of the system to-day.

Q. Of course, not as large? A. Not as large.

Q. But as effective for 1,100 miles of road? A. Yes, sir.

Cross-Examination by Mr. Null.

Q. The shops are designed more particularly for the manufacture and repair of rolling stock, are they not? A. They are designed for the manufacture and repair of all the parts, or for material for all the different departments I have mentioned. Rolling stock constitutes the principal item.

Q. And when you use the term rolling stock, you refer to locomotives, cars and coaches? A. That refers to all locomotives, cars, coaches, steam shovels, snow plows, all tools that are owned while they are used in connection with the operation and maintenance of the railroad.

Q. Are you acquainted with the rolling stock of the Chicago, Milwaukee and St. Paul Railway Company? A. I am.

Q. Are you acquainted with its value? A. Yes.

Q. When you say the South Dakota rolling stock is about eight per cent., do you refer to quantity or do you refer to value? A. Both.

Q. You take both into consideration? A. Yes, sir.

Q. So that you do not necessarily mean eight per cent. of the cars or eight per cent. of the locomotives, do you? A. Yes, sir; and that the eight per cent. of that rolling stock is practically as valuable in proportion as the rolling stock of the rest of the system.

Q. So then it would apply either way, it is eight per cent. of the value or eight per cent. of the quantity? A. Yes, sir.

Q. What is the number of locomotives on the system? A 842.

Q. Do you know the number assigned to South Dakota? A. About sixty-five.

Q. Do you know the number of freight cars on the system? A. I do.

Q. About what is it? A. I have not got my figures with me that show the number of different classes of cars; in fact, the car equipment changes every day and there must be some specific day given as to what the equipment was on that day in order to answer that question correctly.

Q. Can you state approximately the freight cars on the system at the present time? A. At the present time?

Q. Yes, sir. A. About 29,000, but that is not absolutely correct. It is about that.

Q. It is an approximate statement? A. Yes, sir.

Q. What do you regard the equipment of the system worth? A. I have not made any computation on that point.

Q. You think a fair proportion of the shops for South Dakota would be about twelve per cent. of their cost? A. I do.

Q. That is based upon the medium between the per cent. of miles in South Dakota and the per cent. of rolling stock? A. Yes, sir; a little less than a medium between the two.

Q. In giving the value of the shops at $2,450,000, upon what basis do you arrive at those figures? A. In case of the shops that were built and equipped by the company, it was the basis of cost, actual cost. In the case of some shops that were acquired with acquired lines, it is an estimate.

Q. So far as you are personally concerned these figures have been secured by you from the records of the company? A. They have; yes, sir.

Q. Of course you did not personally supervise the construction of those shops? A. I did not.

Q. Or equipment? A. No, sir; well, I did not supervise the construction of only a portion of the construction, some of it I had in hand.

Q. Is it not a fact, also, that the locomotives in South Dakota require more repairs because they are older in pattern? A. My judgment is now that if the age of the engines in South Dakota were taken and their years of age multiplied by the number of engines in service, that it would be considerably less than the age of all the engines on the on the system, taken and multiplied by the number, because they are practically all modern engines in South Dakota.

Q. Are there any compound engines in South Dakota?

A. No, sir; there are a number of ten-wheelers running between Aberdeen and Montevideo. All of the engines of the H. & D. Division are 17x24. The same is true on the Southern Minnesota Division, on all of its lines. All engines in its service on the main line except on the branches and passengers trains on the Southern Minnesota.

Q. What do you mean by 17x24 engine? A. It is an engine of that size cylinder.

Q. Seventeen inch cylinder and twenty-four inch stroke? A. Yes, sir.

Q. Are there any ten-wheelers located in South Dakota other than those on the H. & D. Division? A. Not regularly employed in South Dakota. There are ten-wheelers in the I. & D. Division, and ten-wheelers on the S. C. & D. Division, but as a rule those engines are operated further east than the Dakota lines. They occasionally get west into Dakota.

Q. But it is a fact, is it not, arising from the circumstances in which the system is situated that the older and lighter engines are placed on lines where the traffic is lightest? A. Yes, sir.

Q. That is the natural result from the operation of the system? A. The practice is to use as light engines in the service as can fully and economically do that business, but there is this always in Dakota, that the tonnage and engine in Dakota, even though it is loaded to its full capacity the entire way over the road, it cannot handle the same amount of tonnage, for the reasons I have already given in my testimony, that it could on a line like that between Milwaukee and Chicago, where the water is first class and the engines do not have to meet those trying conditions that are always present in Dakota.

Q. Is it not a fact that the condition of the track in South

Dakota has considerable to do with that question of the capacity of the engine? A. I am not hardly competent to testify on that point but from general recollection my memory is that the grades in South Dakota are not as many in proportion to the total mileage, and they are not as steep as is found in a great many other portions of the system, if that is the part you refer to.

Q. Is it not a fact, without reference to the grade, that the neglect to keep the track in perfect repair in which the track is kept on the more important divisions has considerable to do with the capacity of the engine? A. No, sir; I should not think so. I would not think that would influence it. Weeds in the track so the engine could not get traction would have an influence to lighten the load. Another fact that has a marked influence to lighten the load is the fact that when we have any snow in South Dakota, it always piles up on the railroad, and we get the full benefit of it, and snow piled on the railroad makes it hard to do business and makes it more expensive and cuts down the tonnage of the train.

Q. What kind of a rail pulls the lightest, an iron rail or a steel rail? A. Well, I think a steel rail, if there is any difference. I do not know if there is any or not, but my judgment is a steel rail would have a little the preference.

Q. If the South Dakota lines were charged upon the books of the company with the cost of repairs to an engine that was used on the South Dakota lines in which it was charged with full value of all labor and material expended in that repair, how would the South Dakota lines receive any special benefit from the fact of the shops being owned by the Chicago, Milwaukee and St. Paul road? A. From the fact it would give them cheaper repairs. The repairs

could be made more cheaply by a large, complete and well equipped shop than it could in the limited resources of the state shop, or by going out in the market, having it done by contract.

Q. Do you know what the repairs of locomotives in South Dakota amount to annually? A. I have not got it computed.

Q. Do you know approximately what it is? A. It runs somewhere between four and four and a half cents per mile, I believe, per engine mile. It may be more than that.

Q. That is, for every mile the engine runs it costs from four to four and a half cents for repairs? A. Yes, sir; and maybe more. I am guessing at that now because I have not made that computation.

Q. At that rate how long would an engine run before it had to be scrapped? A. Well, somewhere from twenty to twenty-five years.

Q. How many miles is it calculated an engine will make? A. Well, it depends altogether on the class and condition of the service, and the local conditions that occur that would make the engine wear out more rapidly than general. I would give as a fair average of the system, possibly a million and a half miles, as about the life of an engine. Let me take a piece of paper and figure on it a little bit before we let it go. I think a million and a half miles is not far out of the way.

Q. Now, in order to run a million and a half miles it would require in your judgment from four to four and a half cents per mile to keep the engine in repair? A. Yes, sir.

Q. So that if it makes a million and a half miles, the company would have expended the original cost of the engine

at that rate? A. Yes, sir; many times the cost, the original cost of the engine before it is worn out.

Q. The company would have expended the original cost of the engine and this four and four and a half cents in repairs?

Re-direct Examination by Mr. Peck.

Q. The repairs you have spoken of must be made from time to time as the necessity arises, or should be? A. The repairs here referred to constitute the overhauling and the light repairs and small repairs, they are all added together.

Q. Is it or is it not a fact that unless repairs are made as fast as the necessity arises, the deterioration of the engine goes on with increased rapidity from the fact that the repairs are not made? A. I think there is no place where the old adage, "a stitch in time saves nine," is more applicable than in the railway service.

Q. All kinds of repairs must be done as soon as they are needed or else the locomotive or cars, or whatever it is which needs repairs, the deterioration goes on with increased rapidity? A. Yes, sir; it does.

Witness excused.

Adjourned until 2 o'clock A. M., February 3, 1898.

February 3, 1898, 10 o'clock a. m.

ROSWELL MILLER, called as a witness on behalf of the complainant, having been first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Miller, what position do you hold in the service of the Chicago, Milwaukee and St. Paul Railway Company? A. I am president of the company.

Q. How long have you been president? A. Nearly ten years.

Q. Before that time had you been connected with the company in any capacity? A. I had. I was assistant to the general manager; assistant general manager and general manager.

Q. Prior to your connection with the Chicago, Milwaukee and St. Paul Railway Company, had you been connected with other railway companies? A. I had.

Q. In what capacity? State from the time you first entered the railway service? A. In 1873 I first went into the railway service in connection with the Indianapolis and Vincennes and the Cairo and Vincennes Companies in the general offices in New York. I was there about two or three years, and then came west on the road and remained there until May, 1882. From that time until April, 1883, I was connected with the Western Indiana Railroad Company as treasurer and second vice president. In April, 1883, I went on the Milwaukee and St. Paul road in the capacity I have named as assistant to the general manager.

Q. Are you acquainted with the Chicago, Milwaukee and St. Paul Railway system? A. Yes, sir.

Q. And with its lines in South Dakota? A. Yes, sir.

Q. State generally what are the duties of your position as president of the Chicago, Milwaukee and St. Paul Railway Company? A. Well, I have charge of all the operations of the company through its various departments. There are a large number of departments of the road, and I have charge of all of them and supervise the control of all of them.

Q. What is the amount of capitalization of the Chicago, Milwaukee and St. Paul Railway Company as a system? A. $34,618.66.

Q. Per mile? A. Per mile.

Q. State whether in your opinion the capitalization of $34,618.66 per mile fairly represents the cost of the property? A. It does not.

Q. In what respect does it not represent the cost of the property? A. In all respects. A great deal less than it would cost to reproduce it if it was possible to reproduce it at the present time.

Q. Are you acquainted with the entire system, and have you been over it a many times? A. I have.

Q. And you have been over the lines in South Dakota? A. I have.

Q. Well, state generally what your knowledge of the system is and of its business and traffic? A. In the performance of my duty I have frequently been over the property; have studied it and have examined the reports which are constantly made to me in respect to the condition of the property, its earnings and expenses. I know the communities through which the lines extend; the relative amount of business which they contribute—the relative amount of business which it does and what amounts are contributed

to the road by those communities, and, in a general way, the relation of the cost of operation to the earnings produced.

Q. Do you know what division of inter-state earnings is awarded to the State of South Dakota? A. I do.

Q. State it? A. How do you mean, awarded to the State of South Dakota? You mean in the statistical reports?

Q. Yes, or in any other way, was any division made in fact? A. The division was made at the request of the commissioners and for the purpose of statistics on the mileage basis.

Q. As a matter of fact, was there any division of earnings by states or by any geographical lines in the accounts of the company except what it makes for its own use and its own operation? A. No, sir; no division whatever is made for the benefit of the company. It is a unit, a part of the system. On business moving from South Dakota to other points or from other points to South Dakota, each part of the system over which the traffic passes contributes to the service which earns the revenue from that shipment. There is no such thing as a division of earnings between the different portions of the lines of the same company. The so-called division of earnings is simply a compliance with some state regulation or statute purely for statistical use, or for taxes. In Wisconsin and Minnesota the taxes are based upon the gross earnings and not upon the mileage or property of the company, and some method must be adopted to fix the amount of those gross earnings. In South Dakota and most of the states reports are required to be made to the railroad commissioners or to other authorities of the state, and out of these statutory regulations the practice of apportioning certain parts of the earnings to different states has grown up, but there is no real

or actual foundation for it whatever. The practice of reporting the earnings within the boundaries of any state upon a mileage basis has never been objected to by any state authority to my knowledge, and it has never been claimed that such a division was unfair in any respect whatever to any such state. But, on the contrary, such division has been prescribed and uniformly accepted by them. Obviously no railroad company in making reports could arbitrarily determine and decide that a certain proportion should be given to one state and another division to another state.

Q. And the mileage basis is the one which has been adopted by all of the states through which our system extends? A. It has.

Q. Without objection? A. Without objection. And it has been recognized by the acts of the commissioners of the various states.

Q. You refer to the convention of railroad commissioners in 1895? A. Yes, sir.

Q. If a railroad company should assume to decide and determine what division South Dakota should have and what division the other states should have without following some uniform practice, what would be the probable result? A. It would be chaos; no end of difficulty and trouble.

Q. How are the operating expenses apportioned on this railroad? A. On the basis of the train mileage.

Q. Do you know of any objection having been raised by any state to that basis of apportionment of the operating expenses? A. No, sir.

Q. And the apportionment upon any basis between the

states is as I understand your testimony, purely to comply with statutory regulations of the different states that desire information in regard to the business? A. Yes, sir, purely for that purpose.

Q. Are you informed as to the published inter-state tariffs of freight charges in force upon the system of the Chicago, Milwaukee and St. Paul Railway Company? A. I am informed in a general way.

Q. You do not personally make the tariffs as I understand it? A. I do not personally make the tariffs.

Q. How long have the existing rates been in effect? A. They have been in effect for the past four or five years or longer with the exception of a few changes; but the changes that have been made, have not been such as to alter the relation of rates upon the system. Any alteration that has been made has been such as to fit in with and maintain the general relation of rates. There has been no change for years to materially alter the relation of rates over the lines of the system extending into South Dakota, as compared with the lines extending into the other states through which the system extends. It has always been the purpose of the company to maintain a fair and reasonable relation of rates, taking into account circumstances and conditions attending traffic and its volume upon all parts of the system.

Q. I will ask you, Mr. Miller, have the rates upon the system up to this time, taking into account the circumstances and conditions attending traffic, and the volume of the traffic in South Dakota, been as low upon the line in that state, upon the traffic in that state, as upon other parts of the system? A. They have been in all cases so far as I know as low as the circumstances attending the traffic

and its volume would warrant, and are no higher than the rates upon the system in the various states through which the lines extend, and in most cases they have been lower considering the volume of traffic.

Q. Now, would this relation of rates between South Dakota and the other states be affected or changed by the adoption of the tariff prescribed by the commissioners of South Dakota? A. Yes, sir; they would, because the rates prescribed by the commissioners of South Dakota are lower than the rates in any other state through which the system extends, except in the State of Iowa; in some cases they are lower than the Iowa rates and, in most cases lower than Illinois rates, notwithstanding the much greater volume of traffic and density of population in the other states. They are lower than the rates in Wisconsin, Michigan and Minnesota.

Q. Does the density of the population affect the conditions? A. It does materially.

Q. Are the trains hauling inter-state traffic into and from South Dakota made up of cars containing different classes of freight? A. They are.

Q. And are cars in such trains received and left at intermediate stations between eastern terminals of this company and South Dakota points? A. Probably ninety-five per cent. of the traffic into South Dakota is received by the company from shippers or connecting lines at Minneapolis, St. Paul, Milwaukee, Sioux City or Chicago, and it is doubtless true that as large a per cent. of traffic, inter-state, received by the company at points in South Dakota, is consigned to one or more of such terminals. Trains starting from the terminals containing cars destined for points in South Dakota will also be made up of cars destined to in-

termediate points, perhaps in Minnesota, Wisconsin, Illinois or Iowa. On such trains both to and from South Dakota cars will be taken at intermediate points destined to other intermediate points or to such terminals. Such trains, at least a very large number of them, will contain cars loaded with freight destined to South Dakota or intermediate points, and cars loaded with various classes of traffic under the western classification, upon which the charges of transportation will vary, according to the class, or as to whether there is a carload or only part of a carload. In many instances one or more cars in the train will be loaded with traffic in different classes and carrying different rates. In short, such a train may be and often is made up of cars loaded with different classes of traffic consigned to many points, and of cars received at intermediate points, destined to points upon which the rate of charge is different, so that the receipts of the company on account of the operation of such trains will depend upon a division of rates, also upon commodity rates, upon terminal tariff rates and inter-state tariff rates.

Q. All of those rates vary, do they not, according to the class to which the freight belongs? A. They vary according to the class to which the freight belongs, and the competition, etc., and various other causes.

Q. In connection with the inter-state traffic to which you have referred, will you state the use of the yards and terminal facilities in the cities you have named or elsewhere and how such terminals are a factor, if they are, in the handling of the traffic? A. Freight received at those terminals from connecting lines or otherwise is delivered to the company through its freight house or upon its team tracks; that is, upon cars placed upon tracks accessible to teams for the purpose, or by the switching and transferring

of cars from connecting lines. In many cases warehouses and manufactories are located upon yard tracks or side-tracks so that delivery can be made directly on board the cars, saving to the shipper or consignee switching charges or cost of a team haul. In other words, the tracks and terminal facilities in the city acquired at an expense of millions of dollars, afford facilities to consignors and consignees at substantially the tariff charge for transportation, and at a much less cost than the traffic in any other manner could be handled. The consignee and consignor in South Dakota is largely benefited by the use of such facilities and the traffic passes over tracks in such cities and in the state in which the cities are located, costing per mile many thousands of dollars more than that part of the railway in South Dakota. A large part of the freight from South Dakora consists of grain. There are shipments of cattle. Within the terminal limits or accessible to them, in the cities, there are stock yards, expensive warehouses and elevators accessible to the cars of the company and located upon its tracks, of which the South Dakota shipper has the benefit to a great extent without any increase to him in the price paid for the service rendered him. Large quantities of coal and lumber are shipped from such terminal points, and merchandise, into South Dakota, upon which the cost to the consignee is very much less than it otherwise would be, by reason of yards, tracks and costly facilities in such cities.

Q. In the relation of operating expenses to earnings the volume of business to be handled affects the cost of operation, does it not? A. Yes, sir; greatly.

Q. When the business is light the operating expenses increase in percentage? A. They do.

Q. To the earnings, do they not? A. They do.

Q. Operating expenses of a railroad company are computed and preserved statistically in their relation to the earnings, are they not? A. Yes, sir.

Q. When it is stated that the operating expenses of this company were sixty per cent. and a trifle, a fraction over, that means sixty per cent. of the earnings were paid out in performing the service and doing the business? A. Yes, sir.

Cross-Examination by Mr. Null.

Q. When did your relation with the Chicago, Milwaukee and St. Paul Railway Company begin? A. In 1883.

Q. It had acquired practically all its property it now owns at the time you became connected with the road? A. Practically. The Jim river line was being built the first year I was in. The extension in South Dakota from the Southern Minnesota was being built and the extension of the Iowa and Dakota from some point this side of Mitchell: and the Fargo and Southern was acquired, and the Andover line, and the Madison and Bristol line and the lines west of Aberdeen. With the exception of the last named they were being constructed when I first became connected with the road.

Q. When you say that line from Marion, you mean the line south of Marion Junction? A. Yes, sir. The James river line was being constructed in 1883 and the Southern Minnesota.

Q. What time in the year 1883 did you begin? A. April 1st.

Q. What position did you hold? A. Assistant to the general manager.

Q. And what relation did you have to the construction of these lines? A. None at all.

Q. With reference to the value of this property, you have no personal knowledge of its cost, except as you have inquired into the matter? A. No, sir. The only personal knowledge I have of it was acquired from an examination of the books.

Q. You have no direct connection with the expenditure? A. No, sir; none at all.

Q. Then when you say the property is worth more than it cost you are stating a matter of judgment rather than a matter of knowledge? A. A matter of judgment; yes, sir.

Q. This system of apportioning the earnings for the purpose of taxation and the purpose of statistics was in vogue before you became connected with the company? A. I do not know.

Q. You do not know when that system began? A. No, sir; I do not know when it began.

Q. This system was not developed under your direction? What I mean to say is, that that method was not put in force by any order or direction of yours as an officer of this company? A. No, sir; I think not.

Q. Mr. Miller, are there any tariffs in force in any of the states in your system by which a higher freight rate is charged than is shown by the inter-state distance tariff in force in Michigan, North and South Dakota? A. I do not know.

Q. There are no lines upon your system where a higher freight rate is charged, is made, per ton, per mile, than in the States of Michigan, North Dakota and South Dakota, are there? A. I do not know about that. The tariff for the

rates from Michigan seem to be higher than for Dakota, and they seem to be higher in Michigan and South Dakota than in any other state.

Q. Now, I understood you to say in some cases the proposed tariff of South Dakota would be lower than the present charge in Iowa? A. Very few cases. In most cases the Iowa tariff, the present Iowa tariff, is lower than the proposed South Dakota tariff.

Q. The Iowa tariff at present is much lower than the proposed rates for South Dakota? A. Well, I cannot say how much.

Q. Considerable lower? A. Yes, sir.

Q. So, if there should be some instance where the Iowa tariff should be higher than the proposed tariff in South Dakota, it would be an exceptional case? A. Yes, sir.

Q. And you do not wish to be understood as making that statement as applying generally to the through tariffs? A. No, sir; it is an exceptional case where the Iowa tariff is higher than the proposed South Dakota tariff.

Q. And I see that the Illinois tariff is in most cases higher than the proposed South Dakota tariff? A. It is only an exceptional case where the Illinois tariff is lower.

Q. That would be a purely local rate in Illinois? A. That is purely a local rate.

Q. The proposed tariff in South Dakota is on a par with the tariff existing in Minnesota? A. I judge that the proposed tariff in South Dakota is lower than the Minnesota tariff. It is certainly lower than the distance tariff in Minnesota, Wisconsin and Michigan. That is the only thing I have to compare this with.

Q. The comparisons which you have made and the state-

ments which you have made have reference to the distance tariff? A. Distance tariff, yes, sir.

Q. And are not based upon any comparison with terminal tariffs? A. No, sir.

Q. As a matter of fact, Mr. Miller, to reproduce a railroad would be a physical impossibility? A. No, sir; I do not think so. I do not think it would be a physical impossibility. It would involve a very large expense, it is true, but it would not be a physical impossibility.

Q. Do you think it would be possible to reproduce a system like your system with its cities and towns? A. Yes, sir; I see no physical objection or physical reason why it should not be produced.

Q. But it would be at a large increase of expense over and above what the original line cost? A. That is purely a matter of judgment. My judgment is, it would cost perhaps double the amount. I think the system as a whole would cost three times the amount to reproduce it.

Q. That would relate mostly to right of way? A. Largely to right of way and to the character of the structures and roadbed, and all that, because, in the course of time all of them are greatly improved, and it takes time to establish them on the basis on which the present system exists. A large part of the cost would be right of way.

Q. Do you think the increased cost of right of way would be largely offset by the reduced cost of material? A. No, sir, not largely. The diminished cost of material is largely in rails, and that is comparatively a small amount.

Q. If the auditor of your company was correct in his statement that a large quantity of rails used in the original construction of the system cost $100 a ton, or more, then

the reduction in that item would be four or five thousand dollars a mile? A. If he is correct in that idea.

Q. And you think that reduction would not be equal to the increased cost of the right of way? A. No, sir; I do not think a large part of the rails with which this road was laid cost $100 a ton. In the cost of right of way I include terminals and station grounds.

Q. Mr. Miller, can you call our attention to any instance where the Iowa tariff is higher than the proposed South Dakota tariff where the haul is more than fifteen miles? A. I think that most of the instances in which I have noticed Iowa tariffs being higher than the South Dakota tariff is short hauls.

Q. Under fifteen miles? A. I cannot say whether it was under fifteen miles or not. Here is sheep, 80 mile haul, Iowa tariff, 14.40; proposed South Dakota tariff, 13.70, 140 miles, 18.40 in Iowa; proposed South Dakota tariff, 17.50, and so on. On that sheep rate it seems to be extended quite a distance; it seems to run right through.

Q. That is probably the only case of importance in the state? A. I presume so. Here is thirty miles, class E, rate is 3.52 in Iowa, and proposed rate in South Dakota is 3.50.

Q. What would be that same tariff on class E for 100 miles? A. 4.80 in Iowa, and the proposed tariff in South Dakota, 5.60. Most of the exceptions are under twenty-five miles. From twenty-five miles up, there are few cases where Iowa tariff is as high as the proposed South Dakota tariff, except in sheep.

Witness excused.

Mr. Peck: I offer in evidence the report of the proceed-

ings of the convention of railroad commissioners, held at the office of the Inter-State Commerce Commission, at Washington, D. C., May 14 and 15, 1895, and issued as a volume by the government and particularly part 2 of the report of the committee on railway statistics, which is found on page 12, the resolution beginning at the foot of page 13, and ending near the top of page 14, said resolutions being five in number.

Mr. Null: Objected to as immaterial and irrelevant. It appears that the South Dakota commissioners were not represented at the meeting at which the resolutions were adopted.

It is agreed by counsel for both parties that a copy shall be made of that part of said report offered in evidence as designated in said offer, and that such copy shall be filed with the special examiner, in lieu of the original book containing said report, and shall be returned by him as a part of the evidence, with the same force and effect as the original book, subject, however, to the foregoing objection.

PART II.

Of the Report of the Committee on Railway Statistics.

The second subject referred to the consideration of the committee on railway statistics was the feasibility of securing a classification of earnings and operating expenses by state lines.

Your committee is of the opinion that the object of this inquiry is to point out a feasible and uniform method to be followed by the railroad companies in making answers to the questions on pages (or parts of pages) 29, 35, 45 (bottom) and 61, of the blank for annual reports to the state commissioners, as adopted by this convention some years ago, and now in use in most, if not all, of the states having railroad commissioners.

The plank on the pages referred to requires statements of cost of construction and equipment, gross earnings from operation, operating expenses and statistics of freight and passenger business, train mileage, etc., all by state lines.

Such statistics, in order to be useful, for comparison as between states should of course be made on a uniform basis and your committee have, after a conference with the executive committee of the Association of American Railway Accountants, endeavored to formulate a plan for such purpose, which is embodied in the resolutions at end of this report.

As stated in our report last year to this convention, railroad statistics by state lines are necessarily to a great extent approximations, and should, therefore, be treated as such.

To ascertain for statistical purposes the cost and capital-

ization of railroads by state lines the mileage basis seems to be the only feasible one, but it may and does often happen that the short and expensive terminals are in one state, while the long mileage and low cost is in another state. In such cases an assignment of cost as between states on a mileage basis would be only an approximation, which, for instance, might not perhaps be properly used for purposes of taxation.

Gross earnings can, perhaps, be ascertained by state lines more accurately than cost of road or operating expenses by a computation crediting to each state all operating earnings on all bus ness originating, terminating and being carried entirely within a single state, and its mileage proportion of inter-state business. This method of keeping accounts of gross earnings by states is required by some states for purposes of taxation as well as for railroad statistics. Earnings from stock yards, elevators and the like should be credited to the state where the property is located.

For obvious reasons the assignment by state lines of operation expenses cannot be so accurately made, but it is believed that a more equitable plan than a division on road mileage basis can be found. A moment's consideration of the differences in density of population and traffic in the various states will convince anyone that a division of expenses by miles of road is not proper and equitable.

While certain expenses, such as maintenance of way and structures, can be localized, it is questionable if they should be in view of the fact that the roadbed and structures are used as much or more for inter-state as for strictly state business and traffic. It would rather appear to your committee that all operating expenses would be most equitable divided as between states on a basis of train mileage. Most

if indeed not all railroads keep a record of train mileage by divisions, and the extra expenses of giving this information by states would, in the opinion of the committee, be small.

Your committee is aware of the fact that in many of our states the specific information mentioned herein as to cost, earnings and expenses of the railroads is not required either by statute law or by the commissioners, and we think it proper to say in this connection that the committee does not intend that its recommendations should be adopted by such states. But in states where the law requires this information it is for the best interests of the railroads, as well as the commissioners and the public that the statistics furnished should be as full and accurate as the circumstances and conditions warrant and permit.

As a brief expression of the best judgment of your committee on this matter we beg leave to present the following resolutions for your consideration:

1. Resolved, that in making their reports to the state railroad commissioners the railroad companies shall apportion to each state on a mileage basis, its proportion of cost of road and equipment, its proportion of stock, funded and other debt, and its proportion of fixed charges.

2. Resolved, that the apportionment of operating earnings to each state shall be on the following basis, viz: Each state shall be credited with all the earnings derived from business originating, terminating and being carried entirely within such state, and its mileage proportion of all inter-state business.

3. The earnings and income from all other sources than transportation of such railroad companies shall be credited to each state on a mileage basis.

4. The operating expenses shall be charged to each state on the basis of train mileage in such state.

5. The reports on above basis, in those states so requiring, shall be made the first time in the reports for the year ending June 30, 1896.

Adjourned until February 23, 1898, 2 o'clock p. m.

February 23, 1898

D. J. WHITTEMORE, recalled by complainant:

Direct Examination by Mr. Peck.

Mr. Temple: Let the record show that before the complainant rests the defendants desire to recall for further cross-examination Mr. Bird, Mr. Earling, Mr. Whittemore and Mr. Winne.

Q. Mr. Whittemore, on the 31st day of January, 1898, during your examination, I asked you to state how the costs of replacing the lines in South Dakota, by our company, in the exact situation that they are to-day, having the same degree of efficiency, for the purpose of operation, compare with the original costs of those lines as estimated by you in your testimony? Now, I wish to ask you the question, how would it compare with the original cost if the reproduction of the South Dakota lines was made by an independent company, instead of by our own company? A. I wish to ask, do you mean a company already equipped with a force of constructors, that is, an able, expert force, or a new company?

Q. I mean a new company? A. I have already answered whether we ourselves could reproduce that road any cheaper

than when it was constructed; that I believe we could not build it cheaper ourselves to-day. A new company, unless they had expert workmen, as our company has, and entered upon the construction as we entered upon it, they could not do it as cheaply as we could.

W. N. D. WINNE, recalled by the complainant:

Direct Examination by Mr. Kittredge.

Q. You testified before during this hearing? A. Yes, sir.

Q. Have you read the testimony of Mr. W. G. Collins, general superintendent of this company, relative to the equipment necessary and in use on the lines in South Dakota? A. Yes, sir.

Q. Have you computed the cost of that equipment? A. I have.

Q. You may state what that equipment cost the complainant—the aggregate amount? A. The aggregate amount is $2,933,118.

Q. Have you computed how much that will be per mile in South Dakota? A. I have.

Q. How much is that? A. $2,663.90 per mile.

Q. Have you analyzed the passenger revenue received on account of business done in South Dakota for a period? A. I have caused it to be analyzed.

Q. Was it done under your direction? A. Yes, sir.

Q. For what period? A. For the period of six months, ending October 31, 1896.

Q. Why was that period selected? A. We had already

prepared for our own use the statistics for a portion of this time. It was therefore easier to prepare it for that period.

Q. Is that an average period? A. Yes, sir.

Q. You have determined that from a comparison with other periods? A. Yes, sir; I have.

Q. You may state the result on account of business done local to South Dakota on the basis of four cents per mile? A. $41,990.51.

Q. At three cents per mile? A. $25,527.75.

Q. At two and one-half cents per mile? A. $9,298.

Q. At two cents per mile? A. $35,419.72.

Q. At one cent per mile? A. $951.82.

Q. You may state the total amount of business, purely local, to South Dakota? A. $113,187.80.

Q. Are those figures the actual figures taken from an inspection and examination of tickets, cash receipts and business actually done in the State of South Dakota during the period you have mentioned? A. Yes, sir.

Q. During the same period, how much did the company receive on account of inter-state business? A. The proportion of inter state passenger business for the State of South Dakota?

Q. Yes. A. $69,784.25.

Q. And the total from all sources is what? A. $182,972.05.

Q. What is the percentage of business done on the four cent basis to the total business? A. 61.09 per cent.

Q. Applying the reduction of twenty-five per cent. proposed by the railroad commission upon the business done at four cents, what would be the result? A. The result would be a reduction of $27,943.69.

Q. Applying this reduction to the total business, what percentage is it to the total passenger business of South Dakota? A. A reduction of twenty-five per cent. of the business done, on a four-cent basis, would be 15.27 per cent on the entire business in the state.

Q. Mr. Winne, have you examined the freight business done by the company for a period? A. I have, sir.

Q. For what period? A. For the year ending June 30, 1897.

Q. In what manner did you make an analysis of the business transacted by the company in the State of South Dakota during that period? A. You are referring to this statement?

Q. Yes, sir. A. The terminal tariff?

Q. Yes, sir. A. I made a classified statement of freight transported under a terminal tariff billed from Aberdeen and Sioux Falls, and having arrived at the tonnage of freight of the several classes carried, I applied thereto the rates in effect by the company's tariff, and also the rates under the proposed commissioners' tariff.

Q. You may state what tonnage was shipped from Aberdeen during the period you have mentioned, under their terminal tariff? A. 6,961,441 pounds.

Q. You may state the actual revenue received by the company from such shipments? A. $12,533.57.

Q. You may apply the reduction proposed by the commissioners' tariff, and state what revenue the company would have received for the conduct of such business? A. The company would have received under the rates proposed by the commission, $10,739.96.

Q. You may state the percentage of reduction, if any? A. 14.31 per cent.

Q. You may state the tonnage shipped from Sioux Falls under the terminal tariff, so-called? A. 8,614,202 pounds.

Q. You may state the amount of revenue received by the company from such shipment? A. $19,543.02.

Q. You may state the revenue the company would have received under the proposed commissioners' tariff? A. Had the commissioners' tariff been in force the company would have received $17,541.56.

Q. You may state the percentage of reduction? A. 10.24 per cent.

Q. You may state the total actual revenue received by the company under the terminal tariff, at Sioux Falls and Aberdeen? A. $32,076.59.

Q. You may state the amount that the company would have received had the proposed commissioners' tariff been in force? A. $28,281.52.

Q. You may state the reduction in dollars? A. $3,795.07.

Q. You may state the per cent. of reduction? A. 11.83 per cent.

Q. All the rest of the freight business transacted by the company in South Dakota is proposed to be reduced by the commissioners' tariff at least 20 per cent. Is that true? A. Yes, that is my understanding.

Q. You may state the amount of revenue received by the company from freight buisness in the State of South Dakota other than that derived from the terminal tariff? A. $70,-212.64.

Q. To that the reduction of at least 20 per cent. would apply? A. Yes, sir.

Q. Taking into account this $70,212.64, and assuming that it would be reduced by at least 20 per cent., and $32,-

076.59 at a reduction of 11.83 per cent., what would be the per cent. of reduction of total revenue derived from freight service in the State of South Dakota? A. The reduction on the entire local business in the State of South Dakota would amount then to 17.44 per cent.

Q. Mr. Winne, have you made an application of this reduction to Exhibits "8" and "9," a part of your former testimony? A. I have.

Q. Have you such a statement here? A. This is the statement.

Q. Is it correct? A. It is correct.

Q. I call your attention to operating expenses, including taxes, upon Exhibit 31; you may explain why that line of figures differs from the corresponding line of figures in Exhibit "9"? A. The operating expenses, including taxes, as shown in Exhibit "9," were arrived at on the train mileage basis, as prescribed by the commissioners—by the convention of railroad commissioners.

Q. And in what manner were the operating expenses arrived at as shown in Exhibit "31"? A. They are the actual figures as reported to me by General Manager Earling.

Q. As shown by this Exhibit "31," you have applied to the freight earnings the percentage 17.44, have you? A. Yes, sir.

Q. And to the passenger business, the percentage of 15.27, have you? A. Yes, sir.

Q. Now, you may state the result of the years 1894, 1895, 1896 and 1897? A. Separately?

Q. Separately? A. The year ending June 30, 1894, the net earnings were $48,776.08; for the year ending June 30, 1895, there would be a deficit of $457,767.12; for the year ending June 30, 1896, there would be a deficit of $193,820.52; for

the year ending June 30, 1897, there would be a deficit of $152,350.31; by deficit I mean an excess of expenses over earnings.

Q. You may state the percentage of expenses to gross earnings for the same period? A. For the years ending June 30, 1894, 96.89; for the year ending June 30, 1895, 143.06; for the year ending June 30, 1896, 114.59; for the year ending June 30, 1897, 112.14.

Q. You may apply the reduction you have stated in regard to deficit for the years 1894, 1895, 1896 and 1897, taking into account the interest upon the bond and debt on the company's lines in South Dakota? A. In computing the interest upon the funded debt applicable to South Dakota, on the basis of the miles of road, the interest for four years would be $5,442,084.01 deficit for the four years of $6,197,245.88, an average deficit per year of $1,549,311.47. Computing the interest applicable to South Dakota on the basis of actual bonds issued for those lines, the interest would amount for four years to $4,406,999.72, resulting in a deficit for the four years of $5,162,161.59, an average deficit of, for the four years, $1,290,540.40 per year.

Q. Then Exhibit " 31 " is Exhibts " 8 " and "9 " changed so far as operating expenses are concerned, in accordance with Mr. Earling's statement, and having applied to this statement the reduction upon freight and passenger tariff, as you have stated? A. Yes, sir.

Q. Have you made a like application of this reduction on freight and passenger traffic of the business done on the system for the years ending June 30, 1894, 1895, 1896 and 1897? A. I have; this is the statement.

Q. You may state whether, in its essential features, it corresponds with Exhibit " 7 "? A. It differs from Exhibit

" 7 " by the amount of the reduction of 17.44 per cent. on the freight business, and 15.27 per cent. on the passenger earnings; it also differs in that the operating expenses, including taxes, are stated in one item instead af under several heads.

Q. State what would be the result if a reduction made by the commissioners' tariff on passenger and freight business were applied to passenger and freight business of the entire system?

Mr. Null: Objected to on the ground that it is immaterial.

A. The result after applying the percentage of reduction referred to, to the earnings of the entire system for the four years ending June 30, 1897, would show a deficit of $2,725,744.45, or an average deficit for the four years of $681,436.11. That is to say, the operating expenses, taxes and interest on the funded debt would exceed the gross earnings from all sources by the amount of $2,725,744.45.

Q. I show you Exhibit " 28." Was that made by you or under your personal direction? A. That was made partially by myself, personally, but entirely under my direction.

Q. Is it correct? A. It is correct.

Mr. Kittredge: I offer in evidence Exhibit " 28."

Exhibit 28.

STATEMENT OF EQUIPMENT ASSIGNED TO LINES IN THE STATE OF SOUTH DAKOTA.

	No.	Cost per Car	Total Cost	Remarks
Locomotives	65	$10,300 00	$ 669,500 00	Includes shop margin of 5.
Box cars	3100	553 00	1,714,300 00	
Stock Cars	200	548 00	109,600 00	Includes repair car margin.
Flat cars	175	440 00	77,000 00	
Refrigerator cars	25	787 00	19,675 00	
Coaches	38	4,862 00	184,756 00	Extra—10.
Sleeping cars	1	12,000 00	12,000 00	
Mail and express cars	13			
Baggage, mail & express	1			Includes special for extra service & shop margin, all classes—14.
Passenger, mail & baggage	3			
Passenger and baggage	6			
3 mail	3			
3 baggage	3	29 2,703 00	78,387 00	Extra—4.
Cabooses	40	800 00	32,000 00	Includes shop margin of 4.
Rotary snow-plow	1		15,000 00	
Tool, flanger, wrecking cars, etc.	15	600 00	9,000 00	
Weed burner	1		1,000 00	
Pile drivers	2	5,000 00	10,000 00	
Pile driver tenders	2	450 00	900 00	
			$2,933,118 00	
Miles of road in South Dakota			1,101 06	
Cost of equipment per mile			$ 2,663 90	

February 1st, 1898.

Received in evidence.

Mr. Null: Objected to as incompetent.

Q. I show you Exhibit " 29," and ask you to state whether you prepared that directly, or under your personal supervision? A. It was prepared under my personal supervision.

Q. Is it correct? A. It is correct.

Mr. Kittredge: I offer Exhibit " 29 " in evidence.

EXHIBIT 29.

TOTAL PASSENGER EARNINGS IN SOUTH DAKOTA, SIX MONTHS ENDING OCTOBER 31, 1896.

	Total.	Amount of Earnings @ 4¢ per mile.
Business local to South Dakota:		
At 4¢ per mile	$41,990 51	41,990 51
At 3¢ per mile	25,527 75	
At 2½ ¢ per mile	9,298 00	
At 2¢ per mile	35,419 72	
At 1¢ per mile	951 82	
Total local to South Dakota	$113,187 80	
Total inter-state business	69,784 25	69,784 25
Total from all sources	$182,972 05	$111,774 76
Percentage of business @ 4¢ per mile to total business		61.09%
Reduction of 25% on 61.09% of $182,972.05		$27,943 69
Percentage of reduction on business @ 4¢ per mile to total passenger business of South Dakota		15.27%

Exhibit " 29" received in evidence.

Q. I show you Exhibit " 30." State whether you prepared that personally? A. I did not prepare that personally; it was prepared under my personal supervision.

Q. Is it correct? A. Yes, sir.

Mr. Kittredge: I offer Exhibit " 30 " in evidence.

EXHIBIT 30

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY CO.

STATEMENT OF TONNAGE AND REVENUE ACCRUING ON FREIGHT TRAFFIC BILLED FROM ABERDEEN AND SIOUX FALLS UNDER TERMINAL TARIFFS DURING YEAR ENDED JUNE, 30, 1897, AND REVENUE WHICH WOULD HAVE BEEN RECEIVED ON SAME TRAFFIC UNDER PROPOSED SCALE OF RATES.

From	Tonnage.	Actual Revenue.	Revenue under Proposed Scale.	Perct. of Reductn.
Aberdeen.....	6,961,441	$12,533 57	$10,739 96	14.31%
Sioux Falls.....	8,614,202	19,543 02	17,541 56	10.24%
		$32,076 59	$28,281 52	11.83%

Exhibit "30" received in evidence.

Q. I show you Exhibit "31." Did you prepare that? A. I did not prepare it personally, but it was prepared under my personal supervision. I have examined the same and it is correct.

Mr. Kittredge: I offer Exhibit "31" in evidence.

Exhibit 31.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY.

Gross Earnings, Operating Expenses, Net Earnings, Interest on Bonds, Etc.—State of South Dakota.—Four Years, ending June 30, 1897.

	FREIGHT.						PASSENGER.					
	Total Local	17.44 %	Local less 17.44%	Total Inter State	17.44 %	Inter-State less 17.44 %	Total Local	15.27 %	Local less 15.27 %	Total Inter-State	15.27 %	Inter-State less 15.27 %
Year ending June 30, 1894	137,459 88	23,973 00	113,486 88	1,006,105 62	175,464 82	830,640 80	270,146 47	41,251 37	228,895 10	197,286 74	30,125 69	167,161 05
" " " " 1895	121,442 00	21,179 48	100,262 52	579,650 30	101,091 01	478,559 29	209,200 85	31,944 97	177,255 88	126,997 22	19,392 47	107,604 75
" " " " 1896	110,432 45	19,259 42	91,173 03	881,662 69	153,761 98	727,900 71	217,673 50	33,238 74	184,434 76	145,008 30	22,142 77	122,865 53
" " " " 1897	102,289 23	17,839 25	84,449 98	974,452 63	169,595 74	802,856 89	208,716 19	31,870 96	176,845 23	117,518 71	17,945 10	99,573 61
	471,623 56	82,251 15	389,372 41	3,439,871 24	599,913 55	2,839,957 69	905,737 01	138,306 04	767 430 97	586,810 97	89,606 03	497,204 94

Inter-State Revenue Divided on Basis of Miles Hauled Within and Without the State.

	Express	Mail	Miscls	Total earnings from all sources	Total earnings per mile	Taxes	*Operating Exp. incl'd'g taxes	Operating expenses per mile	Per cent. of Exp. to earnings	Net earnings	Deficit
Year ending June 30, 1894	85,218 77	118,875 55	25,558 76	1,569,836 91	1,425 75	99,233 59	1,521,060 83	1,381 45	96.89 %	48,776 08	
" " " " 1895	55,536 72	120,116 16	23,737 53	1,063,072 85	965 50	99,012 73	1,520,839 97	1,381 25	143.06		457,767 12
" " " " 1896	55,536 72	122,203 83	24,583 11	1 328,697 69	1,206 75	100,690 97	1,522,518 21	1,382 77	114.59		193,820 52
" " " " 1897	55,536 72	123,248 57	25,448 61	1,367,959 61	1,242 40	98,482 68	1,520,309 92	1,380 77	111.14		152,350 31
	251,828 93	484,444 11	99,328 01	5,329,567 06	1,210 10	397,419 97	6, 84,728 93	1,381 86	114.17		755,161 87

*As computed by Vice Prest. & Gen'l Manager Earling.

Year ending June 30	1894	1895	1896	1897	4 years	Deficit 4 years	Deficit Av. per yr.
Interest on Bonds							
On basis of miles of road	1,350,674 64	1,373,287 87	1,370,147 07	1,347.974 43	5,442,084 01	6.197,245 88	1,549,311 47
Actual interest as per mortgages on Dakota lines	1,101,749 93	1,101,749 93	1,101,749 93	1,101,749 93	4,406,999 72	5,162.161 59	1,290,540 40

Exhibit " 31 " received in evidence.

Q. I now show you Exhibit " 32." Did you prepare that, or was it prepared under your supervision? A. It was prepared under my direction and supervision, and has been personally examined by me, and it is correct.

Mr. Kittredge: I offer Exhibit " 32 " in evidence.

Exhibit 32.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY—ENTIRE SYSTEM.

Earnings.	June 30, 1894.	June 30, 1895.	June 30, 1896.	June 30, 1897.	4 years.
From freight	$21,550,686 79	$18,978,262 89	$23,887,930 06	$22,104,802 66	$86,521,682 40
Less 17.44%	3,758,439 78	3,309,809 05	4,166,055 00	3,855,077 58	15,089,381 41
	17,792,247 01	15,668,453 84	19,721,875 06	18,249,725 08	71,432,300 99
From passengers	7,311,822 10	5,852,781 16	6,147,678 88	5,117,495 98	25,029,778 12
Less 15 27-100%	1,116,515 23	893,719 68	938,750 56	873,061 64	3,822,047 11
	6,195,306 87	4,959,061 48	5,208,928 32	4,844,434 34	21,207,731 01
From mails, express, etc.	2,465,442 06	2,504,325 14	2,646,219 94	2,664,469 35	10,280,456 49
Gross earnings	26,452,995 94	23,131,840 46	27,577,023 32	25,758,628 77	102,920,488 49
Expenses, including taxes	20,114,332 65	17,043,753 09	19,676,808 04	18,577,539 08	75,412,432 86
Net earnings	6,338,663 29	6,088,087 37	7,960,215 28	7,181,089 69	27,508,055 63
Interest on funded debt	7,503,747 98	7,629,377 07	7,611,928 18	7,488,746 85	30,233,800 08
Excess of earnings over int.			288,287 10		
Deficit	1,165,084 69	1,541,289 70		307,657 16	2,725,744 45
Average deficit per year					681,436 11
Average miles of road	6,147 08	6,159 35	6,153 27	6,152 55	6,153 06

Exhibit " 32 " received in evidence.

Q. During your cross-examination the other day, your attention was called to a statement from the post office department, showing money paid to the company on account of mail carried in South Dakota, and you were to examine your books upon that subject; have you made such examination? A. I have made such an examination.

Q. Now you may explain the alleged discrepancy? A. The discrepancy was some $10,000, and I have made a careful examination, and have found where the differences were, and have itemized them here.

Q. You may state in detail A. The principal differences are in the cases of the under-statement, in route 143,034, Elk Point to Sioux Falls; the statement includes 23.48 miles; the correct mileage is 35.45 miles; this results in an undercharge of $1,135.61. Route 143,025, Canton to Runningwater, the statement includes 97.39 miles, should be 102.18 miles, an undercharge of $747.71. Route 161,008, from Fargo to Ortonville, of which 1 : nd 28/100 miles is in South Dakota, is omitted entirely. This amounts to $86.04. There were a couple of credits to the company by the government for fines on account of failures to perform service, which were afterwards remitted, $3.46. This statement also includes overcharges, the principal items of which are: Route 141,010, Ortonville to Bowdle, claimed 166.69 miles one year should be only from the Minnesota state line to Aberdeen, and the service instead of being for a year should be only from September 16, 1896, being an overcharge of $1,998.79. Route 159,001, Sioux City to Mitchell, the mileage in Iowa is included, which resulted in an overcharge of $770.99. Route 159,007, Ashton to Allendale, 70.11 miles claimed, should be 64.90 miles. The North Dakota mileage has been included, resulting in an overcharge of $463.50. Route 159,011, Andover to Newark, claim 38.59 miles, should be 38.54, and

the amount per mile ls stated at $55.86, which is the total mileage of the route from Andover to Harlem; should be $42.75 per mile; this results in an overcharge of $507.91. The government also deducted from our compensation during that year for failure to perform service, $7,733.21, on account of washouts and snow blockades. We also paid for carrying the mail from the depots to post offices, $695.12

Q. The items you have mentioned account for all the apparent discrepancies between your testimony and the government's statement to which your attention was called? A. I think I have mentioned them all; this statement shows them in detail.

Q. So that your testimony regarding the compensation on account of carrying the mail is correct, is it? A. Yes, sir.

Whereupon the further hearing was continued to February 24, 1898.

Chicago, February 24, 1898.

W. N. D. WINNE, recalled for further cross-examination on the part of the defendants, testified as follows:

Cross-Examination by Mr. Null.

Q. Mr. Winne, have you any record in your office which shows the number of locomotives assigned to South Dakota? A. Yes, sir.

Q. And the number is sixty-five? A. Yes, sir.

Q. Do the records of your office show the names or numbers by which each locomotive is designated? A. Of the entire number of locomotives, yes. I know the numbers of all of the engines on the road.

Q. You have that in your office, have you? A. Yes, sir.

Q. So that you could give us the name or number by which each of these sixty-five locomotives is designated? A. No, sir.

Q. You could not do that? A. No.

Q. Have you any other description of these sixty-five locomotives by which they could be identified? A. No, sir.

Q. You simply have the number of them? A. Of the entire locomotive equipment, so many are assigned to Dakota.

Q. From what officer do you get this information, that is, who reports to your office the equipment assigned to South Dakota? A. The general superintendent.

Q. That is Mr. Collins? A. Mr. Collins.

Q. This would apply to all of the equipment assigned to South Dakota as well as locomotives? A. Yes, sir.

Q. Is it not a part of the duties of you department to purchase equipment? A. No, sir.

Q. Are you personally familiar with the value of equipment? A. I know what sums are paid for equipment as far as the receipted bills would be evidence of that fact.

Q. Your information, then, of the value of the equipment is confined to the information that comes to your office of purchases made? A. The receipted bills for the purchases of equipment which are on file in the office, yes, sir.

Q. But you did not make any of the purchases yourself? A. No, sir.

Q. Are you sufficiently familiar with the value of equipment so that you could fix the value of any given piece of equipment by an inspection of it? A. No, sir; only in the

most general way, of course. I am not an expert on machinery.

Q. The figures which you have given in Exhibit "28" of $10,300 as the cost of each locomotive—explain how you arrived at that figure? A. That was the average price paid for locomotives for a series of years during which the Dakota lines were under construction. The same is true in regard to all other classes of equipment, prices of cars, etc.

Q. Do you mean that the figures which you have given as the value of the equipment in Exhibit "28" is the average price paid during the years of construction in South Dakota? A. Yes, sir; from 1879 to 1886 and 1887.

Q. From 1879 to 1887? A. 1886 or 1887, I am not sure which.

Q. And these figures have no reference to present values? A. No reference to present values.

Q. And represent, of course, the cost, new? A. The cost new, yes, sir.

Q. There is no definite assignment of box cars to South Dakota, is there? A. No, sir. Do you mean by description or the numbers of the cars.

Q. Yes. A. No, sir.

Q. The cars for the conveyance of freight of all kinds simply pass from one part of the system to the other, as commerce requires? A. Yes, sir.

Q. And there may be more or less cars in South Dakota at any given time? A. Yes, sir.

Q. Where did you get the estimate of the number of cars that would be required for the traffic in South Dakota? A. It was reported to me by the general superintendent.

Q. Mr. Winne, is it your understanding that the sixty-five locomotives now in South Dakota were purchased between 1879 and 1886? A. Well, that I cannot tell. I do not know what particular locomotives are now in the State of South Dakota, or when they were built.

Q. Is not it a fact, Mr. Winne, that is, if you are informed in that respect, that the locomotives are changed about from different divisions of the system? A. I understand that to be so; yes, sir.

Q. And that the locomotives do not necessarily remain in South Dakota from the time they are purchased until they are worn out? A. That is my understanding; yes, sir.

Q. So that in the ordinary course of events it would not be likely that the sixty-five locomotives now in South Dakota are the identical ones that were originally placed there? A. It would hardly be likely.

Q. Were there considerable purchases during the construction period in South Dakota? A. Yes; there were very considerable purchases made necessary by the construction of those lines.

Q. And when were the heaviest purchases made—about what years? A. Well, I could not tell you without reference to the books. I did not figure on any one year. I took a series of years.

Q. Mr. Winne, could you procure for us a record of the purchases of equipment during the years 1883 to 1887, inclusive? A. Yes, sir.

Q. Have you a record where you could send and get it now, or would it take time to prepare it? A. No, sir; it would take time to prepare it.

Q. Do you know, Mr. Winne, the description of these

locomotives in South Dakota as to whether they are eight-wheel engines or ten wheel engines? A. No, sir.

Q. It is a fact, is not it, Mr. Winne, that the company is now constructing locomotives, and has been constructing locomotives, in its own shops for some years? A. Well, to a certain extent. Principally switch engines, and a few of what we call class B engines. A very small proportion of the engines added have been engines built. They have been principally purchased.

Q. It is a fact, is it not, that the engines that have been purchased within the last two or three years have been purchased at a price considerably less than $10,300 each? A. I think not, sir. I think we have been paying over $11,000 lately for locomotives. $11,246, I think.

Q. What class or style of locomotives is that that you have been paying that for? A. I am not positive, I think they are ten wheelers, though.

Q. They are the large, improved modern engine? A. They are modern undoubtedly.

Q. The engines that have been constructed in the shop have been constructed at an expense of something over $7,000, less than $8,000 possibly? A. I think we built some switch engines at a cost of $6,500 or $7,000, and some of these class B engines up to $8,000 or $9,000.

Q. What do you mean by class B engines? A. I can't explain that to you. That is the designation given to them in reports as a certain class or type of engine intended for certain work.

Q. Box cars at $553 each. Mr. Winne, has the company paid as much as that for box cars at any time within the last ten years? A. I cannot tell whether it was within

the last ten years or not. I know between the years 1879 to 1883, inclusive, we paid as high as $650 for box cars.

Q. Has the company paid as much as $553 for box cars at any time since 1884? A. I could not tell you without looking up the records, Mr. Null, but I think they have.

Q. I see a memorandum opposite the item of locomotives which reads: "Including shop margin of five." What does that mean? A. That was reported to me in that manner by the general superintendent. He can explain that better, perhaps, than I can, but I presume it means allowing for the number which naturally would be under repairs at any time or at all times.

Mr. Temple: That is the average percentage that is supposed to be in the shops all of the time for repairs? A. Yes, sir.

Mr. Null: In this statement of total equipment for the system that includes all shop margins? A. Yes, sir. Includes the total equipment owned by the company whether it is in the shop, or wherever it may be.

Q. Calling your attention to Exhibit "29," which shows classification of passenger business in South Dakota, I see you have made a reduction as for all of the inter-state business, amounting to $69,784. Was that four cents per mile business? A. Yes, sir.

Q. Is not it a fact that all inter-state business is four cents per mile business? A. I understand it is substantially so, yes, sir.

Q. Is it a fact that tickets sold from Chicago to South Dakota points are sold upon a four cents a mile basis? A. I can't testify in regard to that. I am not familiar with the rates, personally. I understand that in the division of the

earnings to South Dakota, they are given four cents per mile.

Q. That is to say, that an inter-state ticket is not divided upon a mileage basis pro rata of the amount received for the ticket? A. I understand not. I understand Dakota, as a rule, is given four cents a mile on inter-state business.

Q. Let me ask you how it would be divided where there was a cut-rate, as for instance from Chamberlain to St. Paul? A. If it was a cut-rate, I presume it would have to take its mileage in proportion, but I prefer not to testify about those things personally, as I have not made the figures personally.

Q. This $69,784 would include all excursion business into the state, would it not? A. What is the $69,000?

Q. The inter-state business? A. I presume it would; yes, sir.

Q. And it would include the excursion tickets sold in South Dakota to points outside of the state? A. Yes, sir.

Q. And those excursion tickets are usually sold at less than four cents per mile? A. Yes, sir.

Q. Does that include any inter-state business or passenger traffic covered by mileage books? A. No, sir; that is all given to South Dakota, locally.

Q. All mileage collected in South Dakota is given to South Dakota as local business? A. Yes, sir.

Q. Is that actual or apportioned? A. It is actual. In that statement it is actual.

Q. At two cents per mile, $35,419. Does that represent the amount of 2,000 miles book mileage collected in the state? A. Yes, sir.

Q. How does the amount of mileage collected in the

state, compare with the amount of mileage sold in the state? A. I cannot tell.

Q. Now, at one cent per mile, $951. What is that? A. That is the return fare on some business which was transacted on a special rate. That is, one fare going, and a proportion of one fare returning, for some conventions or meetings of that kind.

Q. So that they would sell a round trip for a fare and one-fifth or a fare and one-fourth? A. Yes, sir; full fare one way, and a reduced rate returning, upon a presentation of a certificate.

Q. Do you know the per cent. of mileage used upon your system of railway as compared with the sale of maximum tickets? A. The sale of maximum tickets?

Q. Yes; that is, for instance, upon the system of the Milwaukee road as a whole, what is the per cent. of passenger travel on two-cent mileage? A. I have not that in mind, but it can be determined, I think.

Q. You have it in your reports, have not you? A. No, it is not a matter of record at all, but I think it can be arrived at.

Q. It is about eight per cent., is not it? A. I really do not know.

Q. Within this period for which you have made this statement—the six months ending October 31, 1896, there were excursion tickets sold in South Dakota to Minneapolis and Sioux City, were there not? A. I don't know. I presume there were. There may have been, at any rate.

Q. That would include the season of the year when the company would be selling excursion tickets to fairs and expositions and such things, would it not? A. Yes, sir.

Q. And this inter-state business here would include all such tickets? A. Yes, sir; if they were inter-state.

Q. This period of time also includes that season of the year during which the company sells excursion tickets into the state, such as harvest excursions and home-seekers' excursions? A. Well, I really do not know much about that myself. I have nothing to do with the traffic of the company. It takes in the summer season when there is more pleasure travel than there would be in the winter, and it also includes the 4th of July. We generally sell excursion tickets then, I believe.

Q. It is a fact, is it not, the company has on sale at all times a round trip rate ticket to South Dakota points from points like Chicago, or in Illinois, at a rate less than four cents per mile? A. I have no personal knowledge of that. I have not given my attention to those details of the traffic at all.

Q. But all inter-state tickets, whether sold into the State of South Dakota or out of the State of South Dakota, and at whatever rate they may have been sold, are included in this estimate of yours of inter-state business? A. Yes, sir.

Q. And in your estimates upon Exhibit "30," Mr. Winne, you have simply taken the way-bills and computed the amount of revenue derived under your present rates and also the amount of revenue that would be derived if the commissioners' schedules were to be enforced? A. Yes, sir.

Q. That is the traffic from Sioux Falls and Aberdeen? A. Yes, sir.

Q. And you find that the average reduction would be 11.83 per cent.? A. The business from Aberdeen and Sioux Falls done under the so-called terminal tariffs; yes, sir.

Q. I see by Exhibit "31," Mr. Winne, that you estimate the net reduction upon the freight traffic in South Dakota at 17.44 per cent.? A. Yes, sir.

Q. As I understand it, you arrived at that by estimating 11.83 per cent. upon the Sioux Falls and Aberdeen business, and 20 per cent. on the remainder? A. Yes, sir.

Q. Now, why do you estimate a reduction of 17.44 per cent. upon inter-state business? A. Well, on the principle that that would be ultimately the result of the reduction of that amount in South Dakota.

Q. That is to say, you assume that the effect upon inter-state business would be identical with the effect upon local business? A. Yes, sir.

Q. And if the inter-state business was done upon a scale or rates lower than the local business in South Dakota would it necessarily have the same effect? A. I believe it would, but I would prefer that the traffic department would testify in regard to those matters.

Q. In making this estimate, you have relied upon the information from the traffic department in that respect? A. Yes, sir.

Q. And you do not assume to say of your own knowledge that the reduction in the locals in South Dakota would reduce the inter-state revenue the same amount? A. No; further than that, it is my belief that it would reduce it that much.

Q. Now, in order for the effect to be the same, the proportion of inter-state business done upon terminal tariffs and upon maximum tariffs would have to be the same as the proportions in the local business, would it not? A. Yes, sir.

Q. Now, do you know as a matter of fact whether the proportions are the same? A. I do not know.

Q. In the local business, you estimate for 1897 a total local business of $102,289; of that amount you estimate that $32,076 was done from Sioux Falls and Aberdeen upon a terminal tariff, so then the business done upon the terminal tariffs would be $32,076, and upon the maximum tariffs, or inter-state distance tariffs, $70,213? A. I have not made those figures. I presume you are right about it, though. $70,212.64, that is correct.

Q. Then in applying the same percentage to the inter-state business, you would assume that the business done upon terminal tariffs and the business done upon maximum tariffs stand in the same relation as they do on the local business? A. Yes, sir.

Q. Thirty-two to seventy? A. That would be the effect of course in applying that 17.44 per cent.

Q. So, then, for this calculation that you have made here, to be correct, or accurate, 70 out of the 102 of the inter, state business would have to be taken upon the maximum tariff, in that proportion? A. Yes, sir; I presume so.

Q. And 32 out of 102 on terminal tariffs or lower rate? A. I presume so.

Q. There would be a further assumption, would there not-that the terminal tariffs would be proportionately the same with reference to the amount charged per ton per mile, that is to say, if the terminal tariffs from Sioux Falls and Aberdeen are eight per cent. lower than the maximum rate, you would assume that the terminal tariffs upon inter-state business are eight per cent. lower than the maximum? A. I have not made any assumption of that kind any further than the figures show. I have figured that out from the

actual business done on terminal tariffs for South Dakota; there would be a reduction of 11.83 per cent.; on the balance of business, seventy-odd thousand dollars, I used the minimum reduction of 20 per cent. understand, the reduction runs from 20 to 33 1-3 per cent. I have taken 20 per cent. as the minimum, and in figuring it in that manner, and averaging the whole, including the $70,000 worth of business not done under the terminal tariffs, it brings the reduction on the total Dakota business to 17.44 per cent., which I have applied to the business as shown in that statement. I have not gone into the matter of how much the terminal tariff is per 100 pounds, or anything of that sort.

Q. What you mean to say is that you assume the same conditions and the same relations exist in applying this percentage to the inter-state business—you assume that the same conditions already exist in the inter-state business as there is in the local business? A. Well, you might say that, yes, sir.

Q. You have not ascertained the amount of inter-state business done upon terminal tariffs or upon maximum tariffs? A. No, sir.

Q. Does this amount given here in Exhibit "31" as the earnings from inter-state business include all inter-line business in South Dakota—business originating in North Dakota for instance, and passing through South Dakota? A. Yes, sir. Whatever there is would be included there.

Q. And is the same true of passenger business? A. Yes, sir.

Q. In your statement Exhibit "29" of passenger business in South Dakota, does that also include any business that may have passed through the state? A. Yes, sir.

Q. I notice in Exhibit "31" that you have computed the

reduction in passenger revenue at 15.27 per cent. on local business, the same as computed in Exhibit "29"? A. Yes, sir.

Q. This percentage is the result of the computation disclosed by Exhibit "29," is it? A. Yes, sir.

Q. Have you made any computation to know what the actual percentage of reduction would be as applied to interstate business? A. No, sir.

Q. So that you assume that the same percentage would apply to inter-state business for the purposes of this computation? A. Yes, sir.

Q. And without ascertaining whether it is a fact or not? A. Yes, sir.

Q. On Exhibit "31," under the column "total earnings from all sources," is that the actual earnings, or is it the earnings that would remain after applying the deduction? A. It is the earnings that would remain after applying the deductions.

Q. The operating expenses as disclosed by Exhibit "31" are not identical with the reports heretofore made to the railroad commissioners? A. No, sir.

Q. Wherein do they differ? A. The reports to the interstate commissioners have been made in various ways. I think for a time they were made on the general average per mile of road for the whole system, but beginning with the year ending June 30, 1896, we used the train mileage basis as recommended by the commissioners in their convention in Washington, of course that being a mere estimate. The operating expenses in this statement are actual as computed by Vice-President Earling.

Q. Do you know whether that computation is made upon

the basis indicated by Mr. Earling's testimony here and the tables which he gave showing the cost of maintenance and operation of the road? A. Whether it is identical?

Q. Yes? A. Yes, sir; it is; except in the matter of taxes.

Q. And this system of estimating the operating expenses gives a result by which the operating expenses of South Dakota lines are considerably larger than the estimate upon the train mileage basis? A. Yes, sir.

Q. Do you know about what per cent. higher? A. No, sir; I do not.

Q. And according to the estimates here on Exhibit "31," there would have been a deficit over operating expenses and taxes in South Dakota of $152,350, without paying interest upon bonds, or dividends upon stock? A. Yes, sir; for the year ending June 30, 1897.

Q. Whereas, the report for that year to the Commissioners of South Dakota, showed a net earning of $493,815.94? A. Yes, sir.

Q. In the computations made in Exhibit "32," you assume that the reductions made by the proposed rates in South Dakota apply to the entire business of the system? A. Yes, sir.

Q. And upon that theory, you arrive at the results here indicated? A. Yes, sir.

Q. You do not assume to say, however, that the proposed reduction in South Dakota would have the effect upon the entire business of the system? A. Well, it is my personal opinion that it would have that effect; yes, sir.

Q. You understood, of course, that the maximum rate in South Dakota is much higher than the maximum rates in

other states where this system is in operation? A. I under stand they are somewhat higher; yes, sir.

Q. Do you think that the lowering of the rates in South Dakota to a level with the rates in other states would necessarily affect the business in the other states? A. That is my opinion; yes, sir.

Q. You have not prepared any statement, have you, showing the revenue that would be derived from the busines of the system if carried on under the rates prescribed by the railway commissioners of South Dakota? A. No, sir.

Q. As a matter of fact, those rates are very much higher than the rates charged for a considerable portion of the business done in other states? A. I do not know personally about the relative rates.

Whereupon a recess was taken to 10 a. m., February 25, 1898.

By agreement of counsel, recess was extended to 2 P. M,. April 1, 1898.

April 1, 1898, 2 o'clock p. m.

J. T. HARAHAN, called as a witness on the part of the complainants, having been first duly sworn, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Harahan, state in what business you are engaged at the present time? A. Railroad business.

Q. With what company? A. The Illinois Central.

Q. And what is your position with that company? A Second vice-president.

Q. As second vice president, what duties are assigned to you? A. I have general charge of the operating and traffic departments.

Q. Describe briefly the location of the line of road under your charge. A. Well, the lines commence—one line commences here and runs through to New Orleans, 912 miles. Another line commences at the Ohio river at Louisville and runs through to Memphis, 392 miles, and another line commences at Memphis and runs through to New Orleans, via Vicksburg, 455 miles. Then there are numerous branches in that territory. Then west from here we have a line from here to Sioux City and to Sioux Falls, with branches running to Manchester, Iowa, to Cedar Rapids, Iowa, and to Lyle, Minnesota, and to Onawa, Iowa, and up to Sioux Falls, South Dakota.

Q. How long have you held your present position? A. Since 1890. That is, with the Illinois Central Railroad.

Q. Were you in the service of the Illinois Central Railroad Company prior to that time? A. No, sir.

Q. When did you begin railway service, Mr. Harahan? A. I commenced railway service in 1861.

Q. In what capacity? A. I was clerk in a freight house.

Q. Where? A. In Boston, Massachusetts. I then went out in the army and was there three years, and as soon as my term of service was up I went to work for the United States military railroads, who were operating during the war certain railroads in the south, and, after the war closed and the government turned the roads back to the owners, I commenced work for the Louisville and Nashville road. That was in 1865, and I remained with them in various capacities until 1889. I went from the Louisville and Nashville to the Lake Shore and Michigan Southern as assistant

general manager, in 1889, and from there to the Chesapeake and Ohio as general manager the same year, and stayed there until the spring of 1890, and was general manager of the Louisville, New Orleans and Texas road until the 1st of November, 1890. Then I commenced with the Illinois Central road and have been with them continuously since that time.

Q. Mr. Harahan, during your connection with the various railroads you have named, and during the various employments you have held since 1861, have you studied and considered the various questions that arise in connection with the operation of railways? A. Yes, sir; I have.

Q. The railway business has been practically your entire business during this time, has it not? A. Yes, sir; since 1861, with the exception of the time I was in the army, I have not done hardly anything else.

Q. During all the time you have mentioned, has your attention been devoted to operation, to traffic, to maintenance and to the various other questions which practically arise in the conduct of the railroad business? A. Yes, sir; I have occupied various positions that naturally gave me experience in the various departments connected with the operation of railroads.

Q. Do you know Mr. Albert J. Earling? A. Yes, sir.

Q. The second vice president of the Chicago, Milwaukee and St. Paul Railway Company? A. Yes, sir.

Q. And until yesterday also the general manager? A. Yes, sir. I have known him quite a number of years.

Q. Have you read his testimony in this case, as printed in the record of it? A. I have read what purports to be his testimony.

Q. Have you read his testimony on the relation of local and through traffic to each other in the operation of railways, as to the expense of conducting them? A. I have.

Q. I will ask you to state whether, in your judgment, the opinions expressed by Mr. Earling in his testimony on those subjects were correct or not? A. In my opinion, he has made a very conservative statement in reference to the cost as between through and local service, as I understand the conditions that exist on those lines.

Q. I will ask you further, Mr. Harahan, are you acquainted, generally speaking—I do not mean specifically, but generally—with the Chicago, Milwaukee and St. Paul Railway? A. Yes, sir; I have been over considerable of it at various times. Some of it I go over nearly once a year. That part of it between Sioux City and Sioux Falls—we usually run our inspection car over that every year.

Q. Some portions of the system are competitive with your system? A. Yes, sir; a good deal of it is competitive.

Q. And its conditions in the western part are similar to the conditions surrounding and governing the operation of your line? A. In a general way, yes, sir.

Q. Well, then, I will ask you to state whether, in your opinion, based upon your knowledge of the Chicago, Milwaukee and St. Paul Railway and of the conduct of its operations, it has been judiciously, economically and capably managed? A. I believe it has been very ably managed. I know a good many of the young men who are connected with it who are bright, sharp, active young men; and being thrown in with them as much as I have, that is the impression I have formed of them.

Q. You stated that you have read Mr Earling's testimony in relation to the relative expense of local and through

traffic; I will now ask you to state your opinion as to the relation they sustain to each other in respect to the expenses of conducting a through business and a local business. A. Well, of course, conditions vary very much with the amount of local business that you do. On some branch lines it would be greater; that is, the proportionate expenses of conducting the local business would be much greater in proportion to the amount handled. In other words, the amount of business handled governs the cost as between the two, and it will vary as the volume of business varies.

Q. Of course, all estimates are based upon the proportion of business done to the cost of doing it, are they not? A. Yes, sir.

Q. Which is the more expensive, in proportion to the earnings, local business or through business? A. Of course the local business is more expensive to handle than the through business.

Q. How much more expensive is the local business in a western state like South Dakota than the through business? A. Well, we have only got fourteen miles in South Dakota, but we have other lines running up to them in Iowa, that are similarly situated, as this part of the line I speak of between Sioux Falls and Sioux City, and we figure out in that country that it costs from two to three times as much to do the local business as it does to do the through business.

Q. In proportion to the earnings? A. Yes, sir; in proportion to the earnings. That is, in my opinion, a very conservative statement. I have not had any figures made on that, but that is the general information I have.

Q. It is true, is it not, Mr. Harahan, that the earnings of a railway company, in proportion to its expenses, depends very largely upon the amount of tonnage it carries per train?

A. Yes, sir; it depends entirely on what it costs to do it, and of course the cost of doing it is what you could do at an economical cost, and the transportiation, of course, is the main factor in the cost.

Q. Therefore, in the economical management of a railway it is important, is it not, that trains should be loaded to their full capacity, or to the largest capacity that they are capable of handling? A. Yes, sir; it is important to load your engines with as many cars as they can haul and make the time you schedule them to make.

Q. You know, either from having kept figures, or otherwise, the tonnage of through trains on the Illinois Central system? A. Yes, sir; we have our engines rated. Our engines running between here and say Fulton, Kentucky, are rated at 1,100 tons per train, that is, gross, 1,100 tons, which includes the weight of the cars as well as the contents. South from Fulton, which is fifty miles below Cairo, to Water Valley, about 180 miles, we haul 850 tons with the same kind of engine, and from there to Macomb we haul 1,100 tons, and from there to New Orleans we haul from 1,200 to 1,300 tons, as much as we can get—it is all down hill—per train.

Q. Assuming that a railway company, on a certain proportion of its system, should average only about ninety-six tons per train, or say, 100 tons per train. Would the earnings on those trains bear any reasonable proportion to the expenses in operating them? A. No, sir; not in comparison with the other trains.

Q. You have a general idea of the Chicago, Milwaukee and St. Paul Railway system? A. Yes, sir.

Q. Are you aware that it does a local business and an extensive through business? A. Yes, sir.

Q. I will ask you to state whether in your opinion sixty and ninety-four hundredths per cent. is a fair and reasonable proportion of operating expenses of the system to the gross earnings? A. Does that include taxes?

Q. Yes, sir. A. I should say that that is very reasonable, taking everything into consideration; the light lines they have got, lines with light traffic; it is very reasonable.

Q. Assuming, then, that the operating expenses and taxes of the entire system, including all its through business, was sixty and ninety-four hundredths per cent., what per cent. of the earnings on local business do you think the operating expenses would be in such a region as South Dakota? A. That is a very hard question to answer, Mr. Peck, because the conditions are such, and of course, I am not familiar with all of the South Dakota lines, and I say it is a very hard question to answer and it would only be a guess if I should give an answer.

Q. It would be at least as much or a good deal more than on the system? A. It would be very much more considering you only haul ninety-six tons per train, or 100, whichever you please to call it; it would be considerably more.

Q. You spoke of a line of your company running to Sioux Falls, South Dakota? A. Yes, sir.

Q. From what point on your system does that line divert? A. From Cherokee, Iowa. It runs from Cherokee, Iowa, to Sioux Falls, South Dakota; about ninety-five miles in length.

Q. Can you state what ratio the operating expenses bear on that line to the earnings? A. Yes, sir; I have some figures made on that. That is a local line, you know.

Q. Do the figures you have include local and interstate business, or only the local business? A. It includes everything.

Q. It is the gross business? A. Yes, sir; it is the gross business.

Q. Will you state, by years, the proportion of operating expenses to earnings? A. Well, for five years, commencing with 1893, it cost—the average cost, commencing with 1893, and ending with 1897, both inclusive—it cost us $116.40 to earn $100, varying in 1893, $107.77; 1894, $122; 1895, $108.90; 1896, $103.30; 1897, $136.10; making, as I stated before, an average cost of $116.40 for five years to get $100.

Q. In other words, Mr. Harahan, the operating expenses were $116.40? A. Yes, sir; this don't include interest. This amount only included operation and taxes.

Q. Of that line, what portion is in South Dakota? A. Fourteen and ninety-five hundredths miles in South Dakota.

Q. The condition of that line is somewhat similar to lines in South Dakota, is it not, as to the character of the traffic and general business? A. They are similar to the line which I know personally, running between Sioux Falls and Sioux City, and I would say, so far as the operating expenses are concerned, both ought to be about the same, everything else being equal.

Q. Mr. Harahan, have you made any figures as to the proportion of operating expenses to earnings of any of your through lines? A. Yes, sir; I have taken the line between here and Freeport as a fair sample of a through line, there being no local business on it, excepting at the City of Rockford and Freeport, and the other being a new line, there is very little on it, properly no local business on it. While the rates are pretty high, the tonnage is very small; I have got those figures.

Q. Where does this Freeport line extend from? A. Chicago to Freeport.

Q. Is it similar to the Chicago and Freeport line of the St. Paul system? A. That I cannot say; I never was over it.

Q. It runs through the same country? A. Yes, sir; and not very far apart. Some places they are very close together, and then they get six or seven miles apart, perhaps further at some points.

Q. There is no special reason why the Illinois Central from Chicago to Freeport should differ much from its earnings and expenses from the Chicago and Milwaukee road? A. No, sir; I should say not. I have never been over the line, but as a general thing I should say there was not a great deal of difference; there might be some, but not a great deal.

Q. Will you give us the result of your investigation in relation to the expenses and earnings upon that line? A. In 1893, for each $100 that was earned it cost $46.40; in 1894, it cost $46.80; in 1895, it cost $57.50; in 1896, $55.70; in 1897, it cost $58, an average cost for the five years of $53.28. I will state that, commencing with 1895, you will notice the cost has gone up, commencing with that year—it was about that time the ties and trestles and things of that kind commenced to need renewal, and it naturally cost more than it did in previous years.

Q. Mr. Harahan, you testified that it cost more to do the local business than the through business, in proportion to the earnings. Won't you explain briefly why that is so? Why running a through train is cheaper in proportion to the earnings than running a local train? A. Well, of course, in a through train, you run your engine at its full capacity from the start, and generally they go over and whole division with a full train, while a local train may start out

with one, two or three cars, or, perhaps none at all, and commence picking up cars at various points until you get to the end of your run—you may get in with a half a train or with a full train, so that naturally the cost is very much different, as can be seen, on account of the nature of the train's haul. We have an example of the thing here, which shows what it costs to do a local business and a through business on the main line of the Illinois Central, and the other line I gave between here and Freeport, being practically a through line, shows how much cheaper it is in comparison with the Iowa line, which has a heavy local business. It is a very good illustration of the thing, taken from our books.

Q. Have you the figures? A. Yes, sir.

Q. Give them, if you please? A. Now, in 1893, on the original 705 of the Illinois Central road, which commences at Chicago and runs through to Cherokee, and our line from Centralia to Dubuque, it cost $70.40 to earn $100. In 1894, it cost us $71; in 1895, it cost us $71.90; in 1896 it cost us $69.40; in 1897 it cost us $74.30, and the average cost for the five years was $71.40.

Q. 71.40 per cent for operating expenses? A. The average cost of operating expenses and taxes. I will say, however, in connection with that, that the earnings of the road were heavy, and there was a very large amount they put in operating expenses on account of the condition of the road, putting in ballast, etc., which, under ordinary conditions, would probably not be charged to operation. That would add but a small per cent. when you come to figure it out in per cent.

Q. Mr. Harahan, I would like to have you give in detail a statement in respect to the expenses of conducting a

through business and a local business. For instance, what, if any, difference is there in the wages paid to the trainmen? A. Local crews are paid more than through crews.

Q. Do you remember how much more? A. Well, it varies with the runs. Usually engineers getting say 4 cents on through freight runs, would get about 4.5 cents on local runs.

Q. Per mile? A. Per mile run. The firemen we pay fifty per cent. of that amount. The conductors we pay $90 per month, and, in some instances, they will not average—when the work is heavy, they will not average eighty miles a day. We have three crews to run over that district. They go out one day, come back the next and lay over a day. So the cost is much greater on the local than on the through run. On the through runs we pay the conductors 3 cents and the brakemen 2 cents per mile, while the local men would probably average 4 cents for the conductor and about 2¼ or 2½ for the brakemen, per mile run.

Q. Take the expenses of switching? A. The expenses, of course, of switching at various stations where they have to stop to do work, set out cars or take on cars, of course is considerable, depending, of course, on how much they have to do.

Q. Well, is there any respect in which the expenses of through trains equal that of local trains? A. No, sir; not that I can imagine. Of course, if the local trains run over the road and did not do any work at any point, then, naturally, the expenses would be the same, but the practice is to stop and do work at the stations wherever it is to be done, which consumes time and coal and causes wear and tear.

Q. The expense of station service—how does that correspond? A. Well, of course, it is much greater for local

business than through business, because it requires a certain percentage of the time of the operator to receive orders for the trains. They have to see that the freight is properly loaded, bill it and take care of it.

Q. You have had experience, I believe, in the care and maintenance of railways? A. Yes, sir; I have been roadmaster in my day amongst other things.

Q. And your present position requires you to be familiar with that question, does it not? A. Yes, sir; I have had active charge of tracks for a good many years.

Q. In what capacity? A. As roadmaster, and conductor of work trains, and various works.

Q. Among the items of expenses connected with maintenance is the replacement of ties, I believe? A. Yes, sir.

Q. You may state about the average length of service, or what is called the life of a tie? A. Where?

Q. Well, say in South Dakota, in that western country there. A. Well, I should say our experience is we get from eight to nine years out of the ties in Northern Iowa and South Dakota.

Q. What kind of ties are you referring to? A. I refer to oak ties. We do not use anything but oak ties practically. We probably have 1,000 cedar ties out there.

Q. How do the oak ties compare with cedar? A. My information is the oak tie will last much longer than the white cedar they get in that country. It will not last as long, however, as a red cedar tie.

Q. How about the life of a rail? A. Well, that varies with the traffic and conditions generally.

Q. And also, I presume, it varies according to the character of the rail, whether it is an iron rail or a steel rail? A.

Yes, sir; we do not talk anything but about steel rails nowadays. No one uses iron. So when we talk rails, we mean steel rails always.

Q. What is the average life of a rail used upon that portion of your system which corresponds most nearly with the South Dakota lines? A. Well, I think that line was built in 1887 and 1888. It was laid with sixty-pound rails, and we have not made any renewal of them on that line up to this time. So that, so far as that particular piece of road is concerned, we have not the experience to say. We have, however, various lines—main lines and branch lines—branch lines with heavy traffic and branch lines with comparatively light traffic—we have had experience with.

Q. Mr. Earling's testimony was that the average life of a rail in that country was about sixteen years. Would you call that a fair, conservative estimate? A. I would consider that a conservative statement so far as the lines I have seen are concerned; the line between Sioux Falls and Sioux City, I would say, that it is a very conservative statement, with the traffic that is done on it.

Q. Mr. Harahan, in your opinion, what repairs on buildings and structures, including platforms, stock yards, turn tables, pumps and wind mills, are required in the operation of a railway? A. You mean, what percentage?

Q. Yes, sir. A. We figure about eight per cent. of what it costs to maintain station buildings, station houses, stock pens, cattle guards, water stations, wind mills, and structures of that character, that is, out in that section. We have got sections of road where it costs twelve or fourteen per cent.; down south, where the climate is bad and the timber rots out fast, it costs us a great deal more.

Q. Your estimate that it takes eight per cent. in that

region is based upon experience and statistics, is it not? A. Based upon statistics and experience, yes, sir.

Q. It is the practice of all railway companies that are properly managed, is it not, to keep statistics of expenses, of the different kinds that are incurred in the operation of the railroad? A. Yes, sir; I suppose all companies do. We keep statistics showing what the bridges and buildings cost us, cattle guards, stock inclosures, rails, ties, ballast, and, in fact, everything that enters into the cost and the operation of the road, and those are kept separate, each item. Ties are kept separate, rails are kept separate, ballast is kept separate, and so on.

Q. And you base your estimate of the future operations of the company upon what experience has shown in respect to the past operation? A. Yes, sir.

Q. It would not be possible, would it, for a railway company to be successfully managed in any other way? A. No, sir.

Cross-Examination by Mr. Null.

Q. In speaking of your line into Sioux Falls, I understood you to say that all the business upon that line was, in its character, local. A. Practically so. Of course, there is a little through business into Sioux Falls. It is practically so.

Q. So that the figures which you have given us, relative to that line, would be an example of a line doing nothing but a local business? A. Practically a local business.

Q. The fact that the line of road crosses the state line does not change the problem? A. Not unless the other conditions change.

Q. If the business of the Chicago, Milwaukee and St.

Paul Railway Company in South Dakota was that of gathering freight in that state to be shipped east, and of distributing freight shipped to that state from the east, the fact that it may have originated in Chicago and have been hauled 500 miles before reaching the state would not relieve it of that character of local freight until it reached the point where the distribution began, or where the gathering ceased? A. That is what we call local freight, when you commence to distribute at any point. For instance, we load a car for points on the Sioux Falls branch. That would go on a through train from here to Cherokee, Iowa, and then be taken on a local train and be distributed at five or six or whatever number of stations there is, to be unloaded between there and Sioux Falls. That is what we call local freight. The same is true in the other direction. We start with one or two cars of freight and stop at various stations and pick up corn and wheat and other freight until we get to Cherokee, Iowa. There it is put in a through train and goes through to Chicago or St. Paul or Minneapolis in through trains. That is what we call local and through business.

Q. So that you understand the proposition clearly, when this freight is gathered up between Sioux Falls and Cherokee, the fact that it be destined for Chicago, or some other distant point, does not divest it of its local character until it reaches Cherokee? A. Yes, sir; until it is put in the through train. It is billed at the various stations where it is picked up through to its destination at Chicago, if it is coming here or going beyond.

Q. And the primary reason for saying that local traffic costs more, compared to the amount earned, than through business, is because of the fact that the train doing that business can only be loaded as the business is gathered?

A. That is right, and at the stations it costs more to deliver it, and bill it, and so on.

Q. And the reverse of the proposition for a train distributing freight? A. Yes, sir; it has to be handled. It is put in the house and distributed out to whoever it is consigned. There may be a dozen or more consignees in the car. That has to be sorted and loaded in the house, and delivered, his expense bill made out and the freight collected when the party comes for his freight.

Q. Would you say there was any difference in the expense of handling freight that had come to Cherokee as through freight, in distributing it locally, and any other local business? A. No, sir; all local business would be the same.

Q. There is no reason for making any distinction? A. No, sir; unless there are other local conditions which may be a distinction.

Q. Then, if the lines of the Chicago, Milwaukee and St. Paul Railroad Company in South Dakota are so mapped out that they have no lines extending beyond that state or no through business, then all the freight traffic in that state would naturally be termed local traffic? A. Yes, sir; if their lines ended there, wherever they pick it up, if they have no through traffic in that state.

Q. Supposing they have no through lines or through traffic? A. It would be local to the state, if it ended in the state, so far as they are concerned.

Q. Now, the expenses of handling the freight would be practically the same, whether the freight originated outside of the state, or whether it originated or terminated in the state? A. So far as the cost of handling local freight, yes, sir.

Q. Are you able to state the average cost of moving the local freight trains? A. Well, of course, that depends on circumstances. That depends on how many cars is hauled and the grades, and so on. It would vary in proportion to the tonnage hauled as a general proposition. Of course, there are instances which I could imagine which would change it some, but not materially.

Q. Can you at this time state from your experience upon the lines with which you are connected the average cost of moving 100 tons of freight one mile? A. Well, yes; we can give you that from our annual report.

Q. You have not looked it up so you can state it here? A. No, sir; but we have got it and can give it to you. We can give you the exact cost per ton and the exact cost of moving it one mile. Not local, of course, but for all.

Q. If the expenses and earnings on local business stood in the relation of 116 expenses to 100 of earnings, it is influenced very materially by the rates which you get for hauling the freight—local rates? A. It is influenced some, of course, by local rates, but principally by the volume of the business.

Q. Your local rates from Cherokee to Sioux Falls are based upon the Iowa maximum rate schedule, are they not? A. Well, on the business in the State of Iowa it is. For interstate business it is not. It is a different rate. But anything originating and destined in the State of Iowa is governed by the Iowa distance tariff.

Q. How many stations have you in South Dakota? A. I think we have got about four, or perhaps five.

Q. On that line? A. Yes, sir.

Q. I mean regular freight stations? A. I do not think

we have got but one. I think there is one outside of Sioux Falls.

Q. And the distance is fourteen miles? A. Fourteen and a fraction.

Q. Now, the freight charges for any of the stations in South Dakota would be governed by a schedule other than the Iowa schedule? A. Yes, sir; it would be governed by the schedule which has been made by the commissioners of South Dakota; that is, purely local business in South Dakota would be governed by that schedule.

Q. But your freight destined for Sioux Falls would be governed by the relations existing between Sioux Falls and the Minnesota rate? A. Yes, sir; it would be interstate business. If it come from a competitive point, it would be governed by whatever the competitor's rates were.

Q. Do you know approximately the difference between Iowa maximum rates and the rates in force in South Dakota? A. I do not.

Q. You were not informed as to the local rates for the Chicago, Milwaukee and St. Paul Railway Company in South Dakota? A. No, sir.

Q. If their local rates in South Dakota were fifty per cent. greater than the local rates of Iowa, which you use upon your line from Cherokee to Sioux Falls, it would have a material influence upon this relation, between expenses and income? A. Naturally, of course, if the rates are higher it helps out the earnings. It don't, of course, affect the operating expenses, but it does the earnings.

Q. The greater part of these earnings to which you have testified upon the road from Cherokee to Sioux Falls was earned upon either the Iowa rate to Iowa stations or upon the Sioux Falls rate? A. No, sir; the greater part of the

earnings from the stations both in South Dakota and in Iowa on account of its being mostly business for points this side of Iowa; the interstate business would not be governed by the Iowa distance tariff. It would be governed by agreed rates, from those points directly to the point of destination, wherever it might be, if it was a competitive point. So those are the rates that would govern from those stations. The Iowa distance tariff, so far as business goes in Iowa, cuts but very little figure, because very little business moves from one station to another in Iowa. It usually goes out of the state.

Q. Is the revenue which you derive from business upon that Sioux Falls line greater or less than it would be if the Iowa schedule applied? A. I think it is greater.

Q. Materially greater? A. Well, not materially, but some greater. I will say that is my best judgment, without having looked into the question.

Q. In that computation you include all earnings of that line? A. Yes, sir.

Q. What is the maximum passenger rate? A. Well, it is 3 cents a mile.

Q. And it is 3 cents a mile in South Dakota on your line? A. Yes, sir; it is a second-class road in South Dakokota, I think, or third.

Q. In speaking about the life of a rail, is not the life of a rail measured more accurately by the number of tons carried over it than the years in the track? A. Yes, sir; when you have got an extensive tonnage. Then, of course, the tonnage would govern. When you have got a light tonnage, it won't amount to that extent it does when it is a heavy tonnage.

Q. Do you know the tonnage of a sixty-pound steel rail

is supposed to carry? A. I have not got it in my mind. I have the figures in my office, but I am not carrying it in my mind.

Q. Can you explain the method calculating that tonnage? A. Yes, sir; it is calculated in several different ways; as, for instance, you have got a level piece of railroad, straight, laid with sixty-pound rail. That road will carry a great many more tons than a sixty-pound rail will where the grades are heavy and they have to use sand to get over it. Or, where there is a great deal of sharp curvature, then the rails wear out faster than on a level, prairie road. For instance, we have got rails we took out within three or four years, seventy-five pound rails, on the main line. The grades were not very heavy, only thirty-nine feet, but the curvature was heavy and the tonnage was heavy. It is a very hard thing, that is, to approximate it, but you have to take the conditions that exist, in order to get the approximate life of a rail.

Q. You say you would be able to tell us the life of a rail in a stated piece of road, as measured by the tons it has carried? A. Yes, sir; approximately.

Q. You think you would be able to answer that question by examining data in your office? A. Yes, sir; I think I can give you the features.

Mr. Null: I would like to have the figures.

Q. The rails which you speak of as wearing out so quick would be rails laid on curves and under heavy traffic? A. And on grades.

Q. On curves and grades and heavy traffic? A. Yes, sir; a rail on the grade, regardless of traffic, wears much faster than a rail on a straight line and level road, regardless of the traffic there is over it. So it is only an approxi-

mation when you get a statement, saying a sixty-pound rail will do so and so. It is an approximation and won't always come anyway near what they approximate it will.

Q. Have you traveled any in South Dakota, east, west or north of Sioux Falls? A. No, sir; I have not been any further north—if you call it north—than Sioux Falls. The only part I have been in in South Dakota is Sioux Falls and Sioux City.

Q. Is it not a fact ties will last longer when laid in a dry, sandy soil, through which the water percolates and disappears very rapidly? A. Than if laid in heavy soil?

Q. Yes, sir. A. Ties will last longer under those conditions, and will last longer in gravel or good stone ballast than either in a sandy soil or clay.

Q. Laid in dry, sandy soil like that would it be any surprise if the average life of an oak tie was fifteen years? A. It would be a great surprise, because I have lots of sandy soil myself.

Q. In a dry climate? A. The same climate as that is up there in this same country.

Q. When was that line completed into Sioux Falls? A. In 1888 or 1887, and we have renewed a great many of the ties.

Q. But nothing like a complete replacement? A. Pretty nearly. Of course, you take a piece of timber, and some of it lasts longer than other. Some lasts nine, ten or eleven years, and some will not last six years. You have got to take the whole thing right through to get the average life of the whole.

Q. What would you say would be expected of a sixty-pound steel rail that had been used for eight years upon the lines of the Chicago, Milwaukee and St. Paul Railway, be-

tween Chicago and Milwaukee, and on their La Crosse divisions, then taken up and such of them as were passed inspection as re-layers, and relaid in South Dakota? A. In what respect?

Q. From an inspection, as to whether it is fit to relay? A. It is a pretty hard question to answer. I could not tell what the condition of it was.

Q. You know what— A. I know what "relayers" are. We have relaid them ourselves, and we do that kind of thing right along. We take the rails up. For instance, in 1890 we had nothing but sixty-pound steel rails on the line of Illinois Central road. It was too light for the traffic. We took it up and put down seventy-five pound rails, and then moved the sixty-pound rails onto the branches. I expected those rails would last ten, fifteen, eighteen or twenty-five years. It depends on the amount of traffic, and the particular branches on which it was laid.

Q. So that those "relayers" under a light traffic, indicated by a showing of ninety-six tons to the train, and one train each way a day— A. Would last a long while. No telling how long it would last.

Q. Might last thirty years? A. Well, I don't know.

Q. It would not be any surprise, under those conditions, to find a rail that would last thirty years? A. Well, as a general proposition, yes. You might find some of them that would last that long, because a rail is like a tie, they don't all wear alike. Some might last that long, and some might wear out a great deal quicker. Those are pretty hard questions to answer. I want to give as intelligent an answer as I can, still I don't want to guess too much at those things.

Q. Considering a local freight train would only average half a load, from the fact it starts loaded and distributes

through the run and reaches the terminal perhaps without any freight, would you say that an average haul for the distance in local traffic of 100 is a light local train? A. Yes, sir; a light local train. I would say it was decidedly a light local train when you consider that on the same run you could carry four or five hundred tons, if you had it to carry.

Q. So that the average tonnage upon a local train would be equivalent to double the tonnage on a through train? A. I do not know whether it would or not. It would depend on where it was distributed. If it was distributed soon after going out or picked up at the other end, it would not.

Q. If the distribution was uniform? A. If it was uniform it might work that way.

Q. Is there any economy in the matter of fuel in the use of modern engines in handling freight? A. Yes, sir.

Q. What would you say was the per cent. of economy? That is, what per cent. of saving is there between a modern engine and an engine constructed fifteen years ago? A. An engine constructed fifteen years ago may be just as modern, so far as its burning of fuel is concerned, as the engine that is constructed to-day, because in the engine constructed fifteen years ago you can use the same kind of things to reduce the amount of fuel consumed as you can upon the other.

Q. Is there any economy in the use of the compound engine as against the other engines? A. Well, I am one of the fellows who do not believe in the compound. I have not any use for them under our conditions. There may be conditions somewhere else that would justify their use, but for ours, I do not care for them.

Q. Are you familiar with the amount of fuel consumed by the ordinary eight-wheel engine, 17 by 24 cylinder, in the

handling of a modern local freight train? A. Well, of course it would vary as the grades vary. Taking the same tonnage as an example, it would vary as the grades vary. In other words, on a hilly road with the same tonnage, an engine would consume more coal than on a level road with the same tonnage. For that reason the amount varies. We have engines which consume from fifty pounds to the mile to sixty-seven, sixty-eight pounds per mile.

Q. Would you say that the consumption of fuel upon the lines in South Dakota, making an avarage haul of ninety-six tons, would be as great per train mile as it is upon the lines—the main lines—of the Chicago, Milwaukee and St. Paul Railroad, where the tonnage per train mile is so much greater? A. That would depend on the amount of local business done. Of course, you understand this much. It would take as much fuel to start a fire in the engine when it starts out. That takes so much whether it hauls one ton or 100 tons. Then, if the local work is heavy, switching at the various stations, etc., it will consume just as much as a through train will.

Q. I am speaking now of the same character of work. A. It would not be as much.

Q. In other words, the consumption of fuel is dependent largely upon the tonnage? A. Tonnage; upon the amount of work it has to do, and the amount of time consumed in making the trip If it is a heavy traffic road and trains are delayed in getting by one another—take a single track road where trains are delayed in going by one another, and they are a long while between terminals, of course; there is more fuel consumed then than if they go right along. The same would apply to a local train. It is switching and delayed by other trains. The amount of coal consumed would prob-

ably be greater than a train going right along, with the same tonnage.

Q. Does the maximum rate in force in Iowa have any influence upon the rate which is commonly known as the Missouri river rate? A. No, sir; the maximum rate in Iowa only applied to Iowa business, and what is known as the Missouri river rate is a competitive through rate from points on the Missouri river to points on the Mississippi river, or beyond.

Q. And may be higher or lower than the maximum rate of the state through which it passes? A. It is not apt to be higher. It is apt to be lower; that is, the through competitive rate.

Witness excused.

April 4, 1898, at 10 o'clock a. m.

Chicago, April 4, 1898, 10 o'clock a. m.

W. N. D. WINNE, recalled for further cross-examination by Mr. Null:

Q. Mr. Winne, have you prepared a statement showing the tons of freight moved in South Dakota, both local and inter-state, for the month of September, 1896? A. I have, sir.

Q. How does that month compare with the other months as to being an average month for the year 1897? A. It is very nearly an average month.

Q. As nearly as could be obtained? A. As nearly as could be obtained, yes, sir.

Q. Could you state the earnings upon inter-state and local freight business for that month? A. Yes, sir.

Q. Please state it? A. The gross revenue from busines local to the state for the month of September, 1896, was $8,795.55, and the revenue from inter-state business apportioned to South Dakota on a mileage basis for the month of September, 1896, was $85,906.08.

Q. I show you Exhibit 33 and ask you if that is the statement of tonnage? A. That is the statement.

Q. Have you prepared a statement showing the revenue train mileage for the year 1897? A. Yes, sir.

Q. I show you Exhibit 34 and ask you if that is the statement? A. That is the statement.

Q. Have you prepared from the books of the company a statement showing the net earnings of the company from 1883 to 1897, inclusive, the interest accruing on funded debt from 1883 to 1897, inclusive, dividends declared from 1883 to 1897, inclusive, and the balance of undivided profits December, 1897? A. Yes, sir.

Q. I show you Exhibit 35, and ask you if that is the statement? A. That is the statement.

Q. Have you prepared a statement showing the quantity and price paid for equipment purchased from January 1, 1884, to December 31, 1897? A. I have, sir.

Q. I show you Exhibit No. 36 and ask you if that is the statement? A. Yes, sir; that is the statement.

Mr. Null: Now, we offer Exhibits 33, 34, 35 and 36 in evidence as a part of the cross-examination of Mr. Winne.

EXHIBIT 33 (Defendant's).

Chicago, Milwaukee & St. Paul Railway Co. Line in South Dakota—Freight Statistics, Month of September, 1896:

	Local.	Inter-State.	Total.
Tons of freight moved	2,815	105,549	108,364
Tons one mile	182,918	7,860,982	8,043,900
Average haul, miles	65	74	74

EXHIBIT 34 (Defendant's).

Revenue Train Mileage—Year ending June 30th, 1897:

	Entire System.	South Dakota,
Freight trains	12,387,036	589,924
Passenger trains	7,819,919	435,717
Mixed trains	992,511	246,901
Revenue trains	21,199,446	1,272,542

EXHIBIT 35 (Defendant's).

Chicago, Milwaukee & St. Paul Railway Company—Net Earnings.

Year ending December 31st, 1883	$ 9,881,785 53
Year ending December 31st, 1884	9,611,369 85
Year ending December 31st, 1885	9,900,801 57
Year ending December 31st, 1886	10,158,139 07
Year ending December 31st, 1887	10,039,430 18
Year ending December 31st, 1888	7,490,377 17
Six mos. ending June 30th, 1889	3,259,722 40
Year ending June 30th, 1890	9,232,610 56
Year ending June 30th, 1891	9,137,724 42
Year ending June 30th, 1892	11,468,503 82
Year ending June 30th, 1893	11,486,946 88
Year ending June 30th, 1894	11,213,618 30
Year ending June 30th, 1895	10,291,616 10
Year ending June 30th, 1896	13,005,020 84
Year ending June 30th, 1897	11,909,228 91
Six. mos. ending Dec. 31st, 1897	7,533,086 43
Interest accrued on funded debt: June 13th, 1863, to December 31st, 1897	140,438,515 29
Dividends declared: June 13th, 1863 to December 31st, 1897	66,562,453 92
Balance December 31st, 1897	10,037,494 68
Less dividend of April, 1898, from earnings prior to December 31st, 1897	2,237,989 00
	$7,799,505 68

General Auditing Department.
Chicago, April 1st, 1898.

EXHIBIT 36 (Defendant's).

Chicago, Milwaukee & St. Paul Railway Company—Equipment purchased January 1st, 1884, to December 31st, 1897:

Year.	Locomotives.		Passenger Coaches.		Box Cars.	
	No.	Price.	No.	Price.	No.	Price.
1884	12	8,750 00	24	4,845 52	200	448 00
"					50	490 00
1885	20	7,640 71	20	5,259 27	100	420 03
1886	10	8,745 53	15	5,710 16	1000	387 55
"	10	7,295 47			250	426 40
"					150	426 92
"					100	506 92
1887	15	8,740 04	25	5,423 88	300	463 63
"	5	9,059 84			100	513 85
"	1	7,390 17				
"	10	8,020 17				
"	1	8,788 93				
1888	5	8,980 00	20	5,346 10	100	483 78
"	5	9,055 00			250	497 36
"	20	8,990 00				
"	15	9,781 30				
"	15	10,409 01				
1889	10	7,600 00				
"	1	11,005 64				
"	1	10,597 36				
1890	10	8,187 19			500	555 74
"					225	581 70
1891	10	11,108 00			250	579 50
"	9	8,226 35				
"	7	8,984 50				
1892	10	9,992 87	40	5,281 81		
"	8	8,307 35				
1893	5	7,150 00				
1896	10	9,415 00				
"	2	11,223 00				
1897	2	11,223 00				
"	4	10,100 00				
"	14	10,845 00				

Year.	Refrigerator Cars.		Stock Cars.		Flat Cars.	
	No.	Price.	No.	Price.	No.	Price.
1884	5	1,192 36				
1885	50	837 30				
1886					300	320 67
"					250	298 75
"					200	285 00
1888			250	474 91		
1890					150	*406 99
"					100	(x)512 30

*Gravel Dump cars.
(x) Ore cars.

General Auditing Department.
Chicago, April 1st, 1898.

Mr. Kittredge: To the introduction of the said exhibits and each of them the defendant, by its counsel, objects for the reason that it is incompetent and immaterial.

Mr. Peck: Counsel for plaintiff offers in evidence annual report of the Chicago, Milwaukee and St. Paul Railway Company for the fiscal year ending June 30, 1897, and it is agreed by and between counsel that the same may not be printed in the record, but may be produced at the hearing.

Mr. Null: Mr. Winne, in the accounts of your office is there any record to show what disposition was made by the company of any of the funds that might arise in the nature of funds remaining on hand realized by the mortgaging of the lines in South Dakota over and above the cost of construction of the lines, if there was any such surplus; for instance, if the lines of road in South Dakota were mortgaged for $17,000 per mile and their construction cost $14,000 per mile, is there any record in your office to show what disposition was made with that part of the surplus? A. Our books don't show any surplus; on the contrary, our books show that the road cost more than was realized from the sale of the bonds and stock.

Q. Some of the lines in South Dakota are bonded for $20,000 per mile, are they not? A. I believe so.

Q. And the books of your company then would show that that part of the lines cost that much? A. I have not figured out the cost; I have not separated the cost of the lines in Dakota. They were constructed without any reference to the state lines; they were built as extensions of road and we have never attempted to separate the cost of the Dakota lines from the other lines, so far as our book accounts are concerned.

Q. So that your judgment is there was no surplus? A. That is my judgment.

Q. And your opinion is that the books of the company would show no information of that kind? A. I know they would not; they show no surplus whatever; on the contrary, they show that the road cost more than the capital.

Re-Direct Examination by Mr. Kittredge.

Q. In what manner was Exhibit 33 prepared? A. It was prepared by a careful analysis of way-bills and reports of business any portion of which was in the State of South Dakota.

Q. In making such examination what, if anything, did you discover in regard to the character of the freight hauled locally in the state? A. There are very few car-load shipments. It is chiefly composed of small lots of high class freight—merchandise, etc. There is occasionally a car of lumber from one local point to another—short hauls. Very little of it is car-load freight.

Q. Merchandise, for example? A. Largely merchandise.

Q. What did you discover in regard to the character of the inter-state freight? A. The inter-state freight was very largely composed of low class freight coming out of South Dakota to the markets—grain, etc.

Q. By Exhibit 35 it appears that there was a balance December 31, 1897, of $10,037,494.68; does that amount represent and, in fact, was it cash on hand at that date? A. No, sir.

Q. The next item refers after that to a dividend April, 1898, from earnings prior to December 31, 1897; explain that item? A. It cannot be determined whether there are any dividends until after the business for the half year is closed up and results are ascertained, and it is probably three months after the close of the half-yearly period before the dividend,

if any, is declared. This represents the dividend that was earned and is properly chargeable to the earnings prior to December 31, 1897.

Q. So that the dividend declared in April, 1898, is payable out of the earnings prior to December 31, 1897? A. Yes, sir.

Q. What was the amount of the dividend payable April, 1898? A. $2,237,989.

Q. What, then, represents the true balance in figures on December 31, 1897? A. The true balance in figures December 31, 1897, is $7,799,505.68.

Q. Do those figures mean that that amount was in the treasury of the company in cash? A. It does not.

Q. You may explain of what items it is composed or made up? A. That amount represents the excess of earnings over expenses and fixed charges and dividends from the organization of the company to December 31, 1897.

Q. It is not a fixed amount? A. It is subject to changes for any items of loss which may hereafter develop in the way of bad debts or earnings uncollected and which are found to be uncollectible, and other charges of that nature.

Q. About the supply of material account? A. And it also includes whatever amount of earnings has been expended for additions to property for which it was not provided that bonds or stocks might be issued for reimbursement. It also includes about two millions of dollars which is at all times locked up in the materials and supplies distributed all over the lines and at the different shops, which it is necessary to carry constantly on hand for the operation of the road. The remainder is, of course, included in our assets, in accounts receivable, or cash on hand. Of course we must keep on hand a working capital.

Q. What about the sinking fund, if any? A. There are some sinking funds which the mortgages provide must be set apart from the earnings of the road each year for the redemption of bonds.

Q. Does that amount—this seven millions of dollars—does that amount include the sinking fund to which you have referred? A. Some of our sinking funds are not chargeable until the middle of the calendar year, the 1st of July. I can't tell at present what portion of the sinking fund is included in that balance.

Q. In your former testimony you have explained about the working capital of the complainant company; is that amount included in that? A. It is, sir.

Q. How about bridge supplies? A. Supplies of every nature, rails, ties, bridge timber, car timber, and supplies of every description.

Q. Are all of these items necessary to be on hand constantly in successfully conducting the operations of a railway company? A. They are, sir.

Q. Could a company be managed successfully or economically without such funds? A. It could not.

Q. While you were upon the stand earlier at this hearing you testified regarding the cost of equipment upon the company's lines in the State of South Dakota, didn't you? A. Yes, sir.

Q. Exhibit 36 purports to give a statement of the equipment purchased from January 1, 1884, to December 31, 1897; you may state in what manner you ascertained the cost of the equipment for the South Dakota lines in your former testimony? A. I ascertained their cost in the same manner that I have prepared that statement—by reference to our original records, but in making up that statement of the

cost of the equipment of the lines in South Dakota I took the average cost of the different classes of equipment during the period of years in which the Dakota lines were under construction. I think I took the years from 1879 to 1886, if I am not mistaken, and took the average cost of each class during that time.

Q. So that the figures you gave are the cost of equipment of all kinds for the lines in South Dakota, the average cost to the company of the equipment furnished during those years? A. Yes, sir.

Re-cross Examination by Mr. Null.

Q. I notice in Exhibit 9 on page 29 of the record, in estimating how much certain earnings would pay interest on per mile, you use the figures 5.69 % as the rate of interest; I will ask you if this is the average rate of interest upon the company's indebtedness? A. That is the average interest upon the bonds which could be applied to the South Dakota lines. From the mortgages I figured the amount of bonded indebtedness on the South Dakota lines and figured the actual interest on the amount.

Q. So that these figures of 5.69 % is the actual interest which the company has to pay upon the mortgages actually upon the South Dakota lines? A. Yes, sir.

Q. It does not necessarily show the average rate of interest which the company is paying upon its whole indebtedness? A. No.

Mr. Null: The annual report referred to in the stipulation is the thirty-third annual report of the Chicago, Milwaukee and St. Paul Railway Company, for the fiscal year ending June 30, 1897, and the same is hereby offered in evidence as Exhibit 37, and filed with the special examiner.

A. J. EARLING. recalled for further cross-examination by Mr. Null:

Q. Mr. Earling, can you state at this time the number of tons of coal upon which you have based your estimate of the fuel consumed in South Dakota? A. Yes, sir; the clerk who made up this statement states that it is 57,191 tons. I did not make up this statement myself, but it was made up under my supervision.

Q. Was that arrived at by some rule as to the quantity per locomotive mile, or is it based upon the actual purchases of your supplies of coal? A. My understanding is that it is based upon the actual amount furnished to each locomotive in the State of South Dakota, taken from the tickets which are given by the engineer in exchange for the coal—or receipts, I should have called them, instead of tickets.

Q. That would include, then, the fuel furnished the engines upon the lines in South Dakota? A. Yes, sir.

Q. Are you able to state the quantity of rails used in replacement and repair work in the State of South Dakota aside from the 125 miles of line that was relaid last year? A. No; I am not able to give that information. It would be necessary to write each section foreman in order to get that information.

Q. The same would be true with reference to the ties? A. As to the ties used in renewals aside from this record in connection with the laying of the 125 miles of new rails, that information can be worked up, but it will take a long time to do it.

Q. And snow fences? A. The same would be true of the replacement and repairs of snow fences. The informa-

tion can be obtained, but it would take a great deal of work and research into the reports to get it accurately.

Q. In your estimate of number of cattle guards, that I understood was an estimate? A. The number of cattle guards in South Dakota?

Q. Yes. A. Yes; that was an estimate.

Q. And it is based upon the fact that 500 miles of the line is fenced? A. About 500 miles.

Q. That would be true, only, in case the fence was upon both sides of the road? A. Yes; there would be no necessity for cattle guards unless both sides of the road was fenced.

Q. So that it would hardly be a fair rule where only portions of the line is fenced on both sides, and where portions of it is only fenced on one side? A. I do not think we have cattle guards where the line is fenced only on one side. As a rule, the road is fenced on both sides where it is fenced at all.

Q. But the estimate of 500 miles of fence includes line which is fenced only on one side, does it not? A. I think most of the 500 miles of road is fenced on both sides; there may be here and there a short stretch of track that is not fenced on both sides; my understanding is that as a rule the fences are on both sides. There are a good many cattle guards at stations where the station grounds are fenced.

Q. The ordinary highway crossing in South Dakota outside of the cities and towns is constructed by placing four planks, one upon each side of the two rails, and spiked down to the ties, is it not? A. The less important crossings are so constructed. The more important ones are planked clear across, that is, from rail to rail, inside, and there is usually one plank on the outside of each rail. Then, in addition to

that, there are the usual crossing signs and whistling posts in connection with it.

Q. There are no extra timbers placed in the track aside from the planking to make the crossing? A. Nothing more than is required to furr up on the ties so as to bring the planks on a level with the rails.

Q. In your estimate of the cost of certain repairs, as, for instance, repairs upon buildings—five per cent.—that includes labor and material both? A. Yes, sir.

Q. And these repairs are usually made by the regular employes of the company? A. Yes, sir.

Q. And their compensation would be included in the pay-rolls of the company? A. Yes, sir.

Q. In details of item 8 on page 303 of the record, I notice you have separated the repairs to freight cars and the repairs to passenger cars; are you able to state whether that item of repairs to freight cars is based upon the number of freight cars assigned to the South Dakota lines, as testified to by Mr. Collins? A. No; the amount is arrived at by taking the total cost of repairs to freight cars for the entire system, and dividing it by the total mileage made by freight cars on the entire system, which gives the cost per mile. Then the total number of miles made by freight cars in South Dakota, multiplied by the cost per mile, gives this amount.

Q. And the repairs to passenger cars is determined upon the same basis—by the same method? A. Yes; in the same manner.

Q. Now, are you able to state the car mileage of South Dakota, freight and passenger? A. Separately from the system?

Q. Yes. A. I can get that information for you if you want it. I cannot give it from recollection.

Q. In your testimony heretofore given in this case you testified that the average tons per freight train on the Sioux City and Dakota division was ninety-six tons, and on the Madison and Woonsocket division it was about seventy tons, as I remember it; are you able to state the average tonnage per freight train on the other divisions in South Dakota? A. No; I am not. I had that information for those two lines worked up for the purpose of testifying in this case; I have not got it for the other lines. It would take a long time to get it. It was much more of an undertaking than I anticipated when I started in with it.

Q. What would you say would be the situation on the H. & D. division as compared to the Sioux City and Dakota division? A. From Aberdeen through to Minneapolis?

Q. Yes. A. It would be very much heavier, I should think—two or three times as much.

Q. As the Sioux City and Dakota? A. Yes, sir.

Q. What would be your idea of the line running from Madison to Bristol? A. That line would not average more than the line from Madison to Woonsocket. Possibly not quite so much. The traffic on that line is very light.

Q. Do they run as many trains on that line as they do from Madison to Woonsocket? A. The same number; one each way per day.

Q. I understand you to say you had mixed train service over the line from Andover north, of three trains a week? A. Yes, sir.

Q. That is the only train service on that line? A. Dur-

ing the larger part of the year; during the fall months, a train is run there every day except Sundays.

Q. How does the train tonnage compare on that line with the others? A. I have no figures at hand; I can only give you my observation. I should say that the tonnage would be less than on the line between Madison and Woonsocket.

Q. How are the branch lines west of Aberdeen; how do they compare in tonnage with the Madison and Woonsocket line? A. They are better.

Q. Will they compare favorably with the Sioux City and Dakota division? A. I should think they would be as good as the line between Mitchell and Sioux City, with the exception of the Orient branch; that is, perhaps, one of the poorest ones we have.

Q. How does the Orient branch and the Andover branch compare? A. The Orient branch is much the poorer.

Q. So, then, your classification of the different lines in South Dakota would place the H. & D. at the head of the lines in freight traffic? A. Yes, sir; the H. & D. from Aberdeen east.

Q. Then the Sioux City and Dakota next? A. Yes, sir; I think the Sioux City and Dakota would come second.

Q. How is the line from Aberdeen to Mitchell? A. It is not nearly so good as the line between Mitchell and Sioux City; I do not think it is as good as the line between Mitchell and Chamberlain.

Q. How does the line between Mitchell and Chamberlain compare with the Sioux City and Dakota division? A. I think that line would come next to the Sioux City and Dakota division.

Q. Then you think the line from Mitchell to Aberdeen

would be, if anything, a trifle below the Mitchell and Chamberlain line? A. It would be about on a parity with that line.

Q. And the lightest lines are from Andover north, and the Orient branch? A. The Orient branch, and the Sisseton branch, and Madison to Bristol, are among the lightest, yes, sir.

Q. In the ordinary repairs of the company, the material for those repairs consists of rails and ties, etc., etc.; those materials are carried on the regular trains of the company, are they not? That is to say, if you were transporting a given quantity of rails from here to South Dakota, for the general and ordinary repairs, it would go out on the regular freight trains of the company, would it not? A. Yes, sir.

Q. It would not be sent by special trains? A. No; we use what are called "extra trains" for the purpose of transporting rails and ties on the divisions where they are to be used, but they are transported to the distributing point by regular trains.

Q. To a distributing point? A. Yes.

Q. And the expense of transporting the rails, for instance from Chicago to Mitchell, is the same as the transportation of any other freight? A. Just the same.

Mr. Kittredge: Speaking of the train tonnage of the lines west of Aberdeen, you had reference to the Eureka line, did you not? A. Yes, sir; I made an exception of the Orient line.

Q. And the cost of the coal that is charged to South Dakota is made up of the actual cost to the company from the point where it reaches the company's lines—the actual cost of transportation to South Dakota? A. Yes, sir.

Whereupon a recess was taken to 2 o'clock p. m.

2:00 p. m.

B. F. MAYER, a witness called and sworn on behalf of the complainant, testified as follows:

Direct Examination by Mr. Kittredge.

Q. What is your name? A. B. F. Mayer.

Q. What is your business? A. I am assistant cashier of the Continental National Bank of Chicago.

Q. How long have you held that position? A. Since the 11th of January of this year.

Q. How long have you been engaged in the banking business? A. I first entered the banking business in, I think, August, 1872.

Q. In what capacity? A. I started in as a messenger for the International Bank here; I worked up there as note teller and collection clerk. I was note teller—handled notes and collections and credits for the bank.

Q. How long have you been connected with the Continental National Bank? A. Since the early part of April, 1883.

Q. Have you been employed in that bank continuously from that date until now? A. I started in there as discount clerk, and was discount clerk steadily till I was promoted to assistant cashier.

Q. As discount clerk, what were your duties in that bank? A. Discounting notes and handling other securities the purchasing of bonds whenever the bank invested in any securities of that kind.

Q. What are your duties as assistant cashier of that bank? A. As assistant cashier I have supervision over the discount department and the ordinary official duties of

the bank, signing drafts, passing on deposits, and correspondence.

Q. Have you any other official position with any financial institution in addition to the position of assistant cashier of the Continental National Bank? A. Yes, sir; in addition to that, Mr. Black, Mr. Armour and Mr. Webster are the American trustees of the Prussian Insurance Company of Stettin, Germany, and I act as secretary for them.

Q. What are your duties in that position? A. The handling of their securities, taking care of their securities in conjunction with Mr. Black, and the purchases of bonds. This insurance company allows us to buy and handle first mortgage gold bonds. They have all of their investments in that class of securities.

Q. In your position which you have held with the Continental National Bank, has it been your business to become familiar, and have you been familiar, with the values of bonds and stocks in general? A. I will say that Mr. Black, the president, and myself have always attended to the purchase of the bonds and such things, and as discount clerk it was my duty to watch the value of collaterals that were put up as security to loans. That is, to keep posted on any collaterals that were put up.

Q. Have you ever bought bonds or stocks of railway companies, and sold them? A. We have bought bonds; the bank does not invest in stocks; but we have very frequently bought bonds of railway companies.

Q. Have you ever taken stocks as collateral? A. We have taken stock as collateral; railroad stocks we take as collateral—that is, at the quotation we would find on them in the New York Exchange.

Q. Are you familiar and do you know the value of the

bonds and stocks of the Chicago, Milwaukee and St. Pau Railway Company? A. Well, if an occasion would arise that we would want to buy any Chicago, Milwaukee and St. Paul Railway Company's bonds, we would refer to the market quotations from such authorities as we knew were liable to keep posted on the market; we would always refer to what was the recognized authority on quotations.

Q. And you generally kept yourself posted as to their values? A. Yes; if a man would ask me for a quotation on any stocks and bonds I would refer back to the records and could get it for him.

Q. Have you in your possession a record of the value of the bonds and stocks of the Chicago, Milwaukee and St. Paul Railway Company? A. I have brought with me what we hold to be the standard record of values, that is, what is recognized as the standard record of value of bonds or stocks.

Q. In making your purchases of bonds, and taking stock as collateral, of the Milwaukee company and other securities of like character, upon what have you relied to obtain your definite information? A. For a quotation for a near-by time we would rely on what we call the Commercial and Finanical Chronicle of New York, edited by William B. Dana of New York. If we were to look back for distant values on the same stock, we would refer to his compilations of those values.

Q. As I understand you, you would act upon this information in making your own purchases? A. Yes, sir.

Q. And in making your own sales? A. Yes, sir.

Q. Both for the bank and for the insurance company? A. Yes, sir.

Q. Now, you may turn to the record there for the year

1898? A. This is the last publication; this goes up to the 1st of January, 1898.

Q. Refresh your recollection or knowledge, and state what was the maximum and minimum value of the bonds of the Chicago, Milwaukee and St. Paul Railway Company for the year ending December 31, 1897? A. We find here, according to this record, that the lowest point for the first Pacific division, 1898, lowest quotation for the year 1897 was 102 in the month of September. The highest point that these bonds reached in that year was 107½ in January of the same year.

The second mortgage, Pacific division, maturing 1898, the lowest point was reached in February, 128; the highest point was 141½ in September of the same year.

The first mortgage, gold, River division, of 1902-7, the lowest point in 1897 was 126 in January; the highest point was 141 in December.

The first I. & M. division, the lowest was 125½ in January; the highest was 132 both in March and April.

The first I. & D. division, the lowest point was 128 in February, and the highest was 133 in March.

The first Chicago and Milwaukee division, the lowest was in January, 126¼, and the highest was 140 in December.

The Consolidated, 1905, the lowest was 128 in January, the highest 142, in December.

The first Iowa and Dakota Extension, the lowest was 130 in January, the highest was 143 in December.

The first South-west division, the lowest was 115⅛ in January; the highest 121¼ in December.

The first LaCrosse and Davenport, the lowest was 109 in January; the highest 114¼ in September.

The first Southern Minnesota division, the lowest 115½ in January; the highest 121½ in December.

The first H. & D. division, the lowest 126 in January; the highest 135 in December.

The first H. & D. division, the lowest was 107½ which was in January; the highest 110 in June.

Chicago and Pacific division, the lowest was 117 in February; the highest 122½ in December.

The Chicago and Pacific Western division, lowest 112 in January; 118½ in December.

Chicago and Missouri River division 5s, lowest 106½ in January; highest 115 in December.

Mineral Point division, lowest 107 in January; highest 111 in December.

Chicago and Lake Superior division 5s, lowest 112 in April; highest 117 in December.

Wisconsin and Minnesota division, 110⅛ lowest in January; highest 116½ in December.

The Terminal 5s, lowest 110½ in January; highest 115⅛ in December.

The Fargo and Southern, assumed, 6%, the only quotation that we have on them is 130⅛ low and high, in December.

Dakota and Great Southern 5s, lowest 107 in January; highest 113½ in December.

General Mortgage A, 1989, 4%, lowest 96 in January; highest 106 in December.

Income Convertible Sinking Fund 1916 5s were quoted at 106½ high and low from May to July. The quotations run the same from May to July.

Milwaukee and Northern first 1910 6%, low 118 in January; highest 122 in December.

First Extensions 1913,6%, lowest 118 in January; highest 122 in December. That completes the bonds.

Mr. Kittredge: Give us the same information as to the stocks, common and preferred, for the same period? A. I find the common stock to have been the lowest during the month of April, 1897, at 69¼, and highest 96¾ in December.

The preferred stock was the lowest at 130½ during May, 1897; highest at 146 in September.

Q. Give us the same information in regard to bonds and stocks of the company for the year 1896? A. The first Pacific division, 1898, the lowest point was 102¾ in August, 1896; the highest was 108¼ in July.

The second Pacific division was the lowest 125 in February; the highest was 128⅛ in December.

The first gold River division, 1902 7s, the lowest was 117⅝ in August, the highest was 129¾ in June.

First I. & M. division 7s, the lowest was 112¾ in August; the highest was 128¼ in December.

First I. & M. division 7s; they ruled steady at 127½ all through the year.

First Chicago and Milwaukee division 7s, the lowest was 122½ in January; the highest was 125 in October.

Consolidated 1905, the lowest was 119 in August; the highest was 132½ in June.

The first Iowa and Dakota Extension 7s, the lowest was 125 in September; the highest was 133½ in May.

The first South-West division 6%, the lowest was 106 in August; the highest was 117⅞ in December.

The first LaCrosse and Davenport division, the lowest was 103 in July, and the highest was 111 in April.

The First Southern Minnesota division 6%, the lowest was 110 in August and the highest was 118½ in December.

The first H. & D. division 7s, the lowest was 120 in July and the highest was 127¾.

The first H. & D. division 5s, the lowest was 101½ in September; the highest was 108.

The Chicago and Pacific assumed 6s, the lowest was 110 in August, and the highest was 119 in June.

The Chicago and Pacific, Western division, low 108 in August; and high 114¾, both in May and December.

The Chicago and Missouri River division 5s, low 102½ in August; highest 111 in June.

Mineral Point division, lowest 98 in August; highest 115⅛ in March.

Chicago and Lake Superior division 5s, lowest 106½ in July; highest 110 in April.

Wisconsin and Minnesota division 5s, lowest 103 in August; highest 112¼ in March and December.

Terminal 5s, lowest 105 in August; highest 114 in June.

Dakota and Great Southern 5s, lowest 105¼ in January; highest 109 in December.

General mortgage A, 1989 4%, lowest 91½ in August; highest 97½ in May and December.

Mortgage continued, sinking fund '16 5s, they were quoted both high and low at 96 in January.

Milwaukee and Northern 6% lowest 114 in January; highest 118¾.

On the 1913 Extension 6%, the lowest was 115½ in January; highest 119 in May.

Q. Please give us the same information regarding the

value of common and preferred stocks for the same period? A. The common stock was lowest in August, 1896, at 59⅞; the highest at 79⅛ in May.

The preferred stock was lowest at 117½ in August and highest at 131 in December, 1896.

Q. Please give us the same information for the year 1895? A. During the year 1895, the first Pacific division 1898 was lowest at 109¾ in September; highest at 115⅝ in January.

The second Pacific division '98 was lowest at 115 in March and highest 119 in June.

The first H. & D. division 7s, lowest 122 in February and March and the highest at 128 in October.

The first H. & D. division 5s, lowest 105¾ in March; highest 108 in October.

Chicago and Pacific division 6s, lowest 116⅝ in April, highest 119 in August.

Chicago and Pacific, Western division 5s, lowest 109½ in February; highest 116 in August.

Chicago and Missouri River division 5s, lowest 104⅛ in April; highest 109¼ in December.

Mineral Point division 5s, lowest 105 in July; highest 108 in November.

Chicago and Lake Superior division, lowest 106½ in July; highest 108 in the same month.

Western Minnesota division 5s, low 107¼ in January; highest 113 in October.

Terminal 5s, lowest 108½ in February; highest 112 in December.

Dakota and Great Southern, lowest 104 in January; highest 108 in September.

General mortgage A, 1989, 4%, low 87 in February; highest 96½ in August and September.

General mortgage A, 1898, registered, '91, lowest in July; highest 94½ in December.

Continued mortgage Sinking Fund, '16 5s, was lowest 102 in July; highest 105 in September and October.

Common stock in 1895 registered its lowest point at 53⅞ in March; its highest quotation was 78⅞ in September.

The preferred stock was lowest at 114¾ in March and highest at 129⅞ in December, 1895.

Q. Give us the same information for 1894? A. The first Pacific division in 1894, 1st Pacific division '98, was lowest at 118½ in October and highest at 122 in April.

First gold River division, 1902, lowest 103 in February and July of that year, and highest at 123 in April.

The first Gold River division 1902 7s, 120 in February, high and low. There is only one quotation there.

The first I. & M. division 7s were lowest at 112¼ in January, and highest at 121 in March.

The first I. & M. division 7s, lowest at 119 in March; highest at 128 in June.

First Chicago and Milwaukee division 7s, lowest 124 in February; highest 128 in March.

Consolidated 1905 7s, lowest 126 in July and August, and highest 131 in October.

First Iowa and Dakota Extension 7s, lowest 127 in January; highest 131¾ in April.

First South-Western division 6s, lowest 112 in January; highest 119½ in December.

First LaCrosse and Davenport 5s, lowest 105 in August; highest 108½ in December.

First Southern Minnesota division 6s, lowest 111¾ in January; highest 119 in December.

First H. & D. division 7s, lowest 123 in July; highest 129¼ in June.

First H. & D. division 5 per cent., lowest 104 in January; highest 108 in November.

Chicago and Pacific division 6s, lowest 115 in January; highest 120¾ in June.

Chicago and Pacific, Western division, lowest 107 in January; highest 114 in December.

Chicago and Missouri River divisions 5s, lowest 101½ in January; highest 108⅜ in June.

Mineral Point division 5s, lowest was 102¼ in January and the highest 106½; it runs for three or four months at 103½.

Chicago and Milwaukee division, lowest 106 in February; highest 108 in December.

Wisconsin and Minnesota division 5s, lowest 104 in January; highest 110 in December.

Terminal 5s, lowest 106 in January; highest 111 in December.

Dakota and Great Southern 5s, lowest 102½ in February; highest 108½ in December.

General mortgage A 1989 4s, lowest 90 in July; highest 92½ in June.

Continued Mortgage Sinking Fund '16 5s, the lowest and highest was 103, in January.

The Fargo and Southern assumed 6%, lowest was 116 and the highest was 118.

The lowest point that the common stock reached in 1894

was 54¼ in January and the highest point was 66½ in August.

The preferred stock reached its lowest point at 116 in January, and the highest 123½ in March, 1894.

Q. Give us the same information for the year 1893? A. For the year 1893, the first Pacific division '98 was lowest at 108 in August; highest at 120½ in January.

Second Pacific division '98 was lowest at 118 in December and highest at 123 in February.

The first Gold River division 1902 7% was lowest at 116½ in August and highest at 127½ in April.

The first I. & M. division 7% were lowest at 108 in August and highest at 122 in April.

The first I. & M. division 7s were lowest at 112 in August, and highest at 125 in June.

First Chicago and Milwaukee division 7s were lowest at 116½ in August and highest at 126 in December.

Consolidated 1905 7s were lowest at 119 in August and highest at 129 in April.

The first Iowa and Dakota Extensions 7s were lowest at 116 in July, and highest at 129 in December.

The first LaCrosse and Davenport division 5s were lowest at 95 in August and highest at 105 in April.

The first Southern Minnesota division 6s were lowest at 106 in August and highest at 116½ both in February and in December.

The first H. & D. division 7s were lowest at 110½ in August and highest at 125 in December.

The first H. & D. division 5s were lowest at 100 in September, and highest at 105 in December.

The Chicago and Pacific division 6s were lowest at 111 in September, and highest at 118½ in June.

Chicago and Pacific Western division 5s were lowest at 103 in August, and highest at 112 in May.

The Chicago and Missouri River division 5s were lowest at 90 in August and highest at 105 in April and December.

Mineral Point division 5s were lowest at 92 in August and highest at 105 in April.

Chicago and Lake Superior Division 5s were lowest at 106 in April, and highest at 107 in May.

Wisconsin and Minnesota division 5s were lowest at 98 in July and highest at 108 in May.

The Terminal 5s were lowest at 98 in July and highest at 108½ in April.

The Dakota and Great Southern 5s were lowest at 99 in August and highest at 107 in April.

The General Mortgage A 1989 4s were lowest at 86 in July and highest at 95 in April.

I find that the lowest point reached by the common stock in 1893 was 46⅜ in July, and the highest point was 79¼ in April.

The preferred stock reached its lowest point in 1893 in July at 100, and the highest point during that year was 125¼ in February.

Cross-Examination by Mr. Null.

Q. During the year 1893 there occurred a very extensive panic in the United States? A. Yes, sir.

Q. And that accounts for the difference in values at the

different times during that year? A. In a great measure, yes, sir.

Q. Can you tell me what the I. & D. extension mortgages were quoted at in the year 1878? A. No; I have no way of telling by the records here. In fact, I do not think you can get anything authentic in book form that will show that, at the present time. You might find out by inquiring at the New York Exchange.

Q. How far back are you able to go with the records before you? A. As far as the bonds are concerned, I can go back to the year 1890.

Q. That is as far back as you can go? A. That is as far back as I have the record. With the stock, I can go back further; I can go back as far as the year 1882 so far as the stock is concerned, that is, in giving the highest and lowest points during the years.

Q. What were the Chicago and Missouri River division bonds quoted at in the earliest quotations which you have there? A. This is 1890; do you want the highest and the lowest quotations?

Q. Yes. A. I find that the lowest point that they had reached was 97 in November, and the highest that they reached was 103¾ in June.

Q. And the Dakota and Great Southern? A. The Dakota and Great Southern were lowest at 99 during March and November, and highest at 103½ in June of that year.

Q. What was the quotation on Chicago and Pacific Western during that year? A. The lowest point that they touched during that year was 103 in December, and the highest point was 109¼ in June.

Q. What was the H. & D. extension? A. Well, the H. & D. extension—was—the 5s or the 7s?

Q. The 7s? A. The lowest point was 117½ in December and the highest point was 127 in May.

Q. I want to get the quotation on a few of these bonds? A. The quotation on April 2, 1898?

Q. Take the H. & D. 7s? A. The H. & D. 7s in the last edition of this supplement, which was issued on the second of this month, was 128 asked; no bid appears.

Q. And H. & D. 5s? A. 104 bid; no asked price; none offered.

Q. Chicago and Missouri River? A. 114 asked; no bid.

Q. Chicago and Pacific Western? A. Chicago and Pacific Western 5s, 1921, 113¼ bid; 114¼ asked.

Q. What is the general mortgage quotation there? A. General, gold, 1898?

Q. Yes. A. They were par bid; 104 asked.

Q. I understand you to say that some of the bonds commanded a heavy premium up to their maturity; please explain that fully? A. It very frequently happens that a railroad will refund bonds and they sometimes give the holder the option to exchange them at a certain price for the new security. That is, they will refund them and issue new bonds for them, and that option is worth something to the investor inasmuch as he can exchange his present holdings for something that will run in the distant future and it will save him having to go out on the market to reinvest his money. For that reason very frequently as they mature will bear quite a premium. Then, again, it is sometimes optional with the railroad company to retire the security at a certain price. That is, if the Chicago, Milwaukee and St. Paul Railway Company had an issue of bonds which they could retire at any time by giving notice, at 105, those bonds

would never sell for less than 105, because the holder will surely get his money at 105 at some time.

Q. Do you know of such agreements with the Chicago, Milwaukee and St. Paul Railway Company? A. I can't recall any at the present time, but I could by going back and looking at the records.

Q. Do you recollect of any known option with reference to the unloading of bonds for preferred stock? A. My impression is that the St. Paul road did retire an issue of bonds and gave the holder the option of exchanging them for preferred stock in the company.

Q. Was there an option at the time of the issue of these general mortgage bonds? A. The railroad companies generally in redeeming or refunding their bonds give such an option to the holders of present securities.

Q. Of exchanging them for future securities? A. Yes, sir; we have a case of the Lake Shore road refunding their indebtedness into one set of bonds; those bonds are selling at a big premium to-day. The railroad gives notice "we will exchange those bonds at such and such a price," which is usually the premium over the face of the bonds. They have got to do that in order to give the holder some inducement to exchange his security.

Q. Did I get the value of the stocks—present quotation? A. No.

Q. Give us the present quotation on common and preferred. A. The common stock during April was at 98. I will give you the highest and lowest range since January 1st. The lowest was 85⅜, March 12, and the highest selling price—these were actual sales—97⅛ on January 12, on common stock.

For the preferred stock, the lowest selling price was 142½

on January 3, and the highest selling price was 149½ on February 16th.

Q. What advantage do you understand does the preferred stock have over the common stock? A. The preferred stock has got a dead sure thing of a dividend; the common stock has got to wait until there is enough money made to give such a dividend as the company may elect to declare on it.

Q. On what amount do you understand the dividend on preferred stock has to be before the common stock gets any dividend? A. Well, according to the arrangement of the company they declare a given dividend on the stock; I don't think they can go to work and declare a sweeping or exorbitant dividend on the preferred stock before they would declare a dividend on the common stock.

Q. Do you understand what the dividend is on the preferred stock? A. About seven per cent.; I should not think a ten per cent. dividend would be an exorbitant dividend that they might declare before they would give the common stock a dividend.

Re-direct Examination by Mr. Kittredge.

Q. You have no personal knowledge of any stock contracts? A. No.

Q. Or who holds the stock, common or preferred? A. No; we don't deal in stocks.

Q. Can you handily tell us the highest and the lowest price at which the common stock sold from the years 1886 down to the year 1890? A. I think I can, yes, sir.

Q. Please do so. A. In 1885 the common stock was lowest at 64¾ and the highest was 99. The preferred stock was lowest at 102, and highest at 125.

In 1886 the common stock was lowest at 82⅝ and highest at 99. The preferred stock was lowest 116, highest 125¾.

In 1887 the common stock was lowest 69⅝ and the highest was 95.

The preferred stock was lowest at 110 and highest at 126¼.

In 1888 the common stock was lowest at 59¼ and highest at 78. The preferred stock was lowest at 98½ and the highest 117.

In 1889 the common stock was lowest at 60⅞ and highest at 75¼. The preferred stock was lowest at 97 and highest at 118.

In 1890 the common stock was lowest at 44 and highest at 79⅝. The preferred stock was lowest at 99¼ and highest at 123⅛.

GEORGE B. HARRIS, a witness called and sworn on behalf of the complainant, testified as follows:

Direct Examination by Mr. Peck.

Q. Mr. Harris, in what business are you engaged at the present time? A. I am employed by the Chicago, Burlington and Quincy road.

Q. In what capacity? A. Vice president, and of other corporations that are connected with the Burlington system.

Q. Where is the Chicago, Burlington and Quincy road; where is it located; where does it run? A. Well, I believe we have lines in eleven different states. The eastern termini may be said to be Chicago, Peoria and St. Louis, St. Paul and Minneapolis on the north, and the western termini are Billings, Montana; Deadwood, South Dakota; Cheyenne, Wyoming; Denver, Colorado.

Q. What are your duties as vice president of the Chicago, Burlington and Quincy? A. I am in general charge of the traffic and operating departments.

Q. How long have you held your present position? A. I think since 1890 here in Chicago. Before that I was president of the Chicago, Burlington and Northern at St. Paul; that is also a part of the Burlington system.

Q. When did you begin in the railway service? A. I first begun in 1866 and remained in the service but a short time and then went away to school for a time. I returned to the service in 1868 and have been continuously in the railway service from that time to the present; except for a short time that I was engaged in manufacturing.

Q. In what different capacities have you been employed by railway companies; begin with your first entering the railway service and briefly state the different employments you have had up to the present time. A. I was an office boy, and a clerk. That was on the Hannibal and St. Joe. I was office boy and clerk, and along about 1870 I was paymaster of the Hannibal and St. Joe road for a short time. Early in 1870 I went to Nebraska. I was employed in the land department of the H. & M. road, the Burlington and Missouri River road in Nebraska, as a clerk, and showed lands to settlers, and I was employed in various capacities there. Then I was clerk for the superintendent and assistant to the general superintendent. I was then fuel and supply agent. I was then purchasing agent. Then I was superintendent of the Atchison and Nebraska road; then I was assistant general freight agent of the B. & M. road; then I was made general freight agent of the B. & M. road; then I was made purchasing agent for the C., B. & Q. road, and then in about 1882—I would have to look up the dates to

be exact—but about that time, I think the latter part of 1882, I was connected with the rolling mill of John B. Ayers' Sons, and was in that business as a salesman for some months, and then I returned to the railway service, being employed by the Atchison, Topeka and Santa Fe Railway, and went to Mexico. I was down there for about eight months; then I returned to Topeka and was assistant general manager of the Atchison, Topeka and Santa Fe road until along in 1884. Then I became general manager, and later vice president, although the duties were substantially the same at that time, and I constructed and had charge of the construction and operation of the Chicago, Burlington and Northern from the time it was started until it was completed and operating, and finally sold to the Chicago, Burlington and Quincy system, at which time I became vice president of the Chicago, Burlington and Quincy in charge of the traffic and operating departments, and am in that position now.

Q. During the time that you have been connected with the various railways you have mentioned, have you had occasion to study and to consider the various questions that arise in the operation of railways? A. I have done it all of the time to the extent of my ability.

Q. Your duties have made it necessary that you should, have they not? A. Yes, sir; I have been in direct charge of the operation as well as having general supervision of all of those matters.

Q. Have you been connected with any railway companies during the periods of construction? A. Yes, sir; I have had charge of the Chicago, Burlington and Northern from the time the survey was made until the survey was completed, and until the road was finished, and have also had charge of construction elsewhere.

Q. Between what points is the Chicago, Burlington and Northern located? A. The road was built from Oregon, Illinois, to St. Paul, Minnesota.

Q. And you have been connected with the various departments you have named during those times? A. Yes, sir.

Q. I will ask you to state whether or not in your capacity as vice president of the Chicago, Burlington and Quincy road you have now charge of those departments? A. I have charge of all of the departments; direct charge of the operation and maintenance of the road, and of the traffic.

Q. Are you acquainted with Mr. Albert J. Earling, vice president of this company? A. Yes, sir.

Q. Have you read his testimony as delivered in this case and printed in the record? A. I have read it briefly.

Q. Mr. Harris, is there a difference in the expense of conducting local traffic as compared with through traffic in proportion to the earnings from each? A. I should say there was a very large difference.

Q. Which is the more expensive business to conduct? A. The local business is very much the more expensive.

Q. What ratio in expenses would you say that local and through business bear to each other? A. I should say that a very conservative estimate of the earnings and expenses would be at least three to one; that is to say, that the local traffic in that relation is three times as expensive.

Q. As through traffic? A. Compared with what is produced, all of the circumstances taken into consideration, by the movement of tonnage.

Q. Are you acquainted, generally speaking, with the Chicago, Milwaukee and St. Paul Railway system. A. Yes,

sir; I know a great deal of it in detail. In a general way, I know it all.

Q. Part of your present system is in competition with the Chicago, Milwaukee and St. Paul system? A. We are in sharp competition with the St. Paul system for a very considerable mileage and for a very large tonnage.

Q. I will ask you, in your opinion, based upon your knowledge of the Chicago, Milwaukee and St. Paul Railway system and of the conduct of its operations, whether it has been economically and judiciously managed since you have known it? A. I should say that the St. Paul road has been well managed and has been as economically managed as is possible consistent with rendering good service and safe service and substantial maintenance of the property.

Q. You have stated that the expenses of conducting local business is as much as three times as great as the expense of conducting through business in proportion to the earnings derived; will you please state the reasons, or some of the reasons, for this opinion? A. Well, among the reasons for that, I should say, that in the first place as a rule all of the expert labor, the train and engine men, as a rule receive higher pay in local than in through service. The local trains are compelled to start out almost invariably rather light so as to be able with reasonable promptness to do the switching and work at local stations. They are frequently compelled to take and move business along the line, and arrive at their destination with very small loads. The amount of switching upon a local train is such that much more property is broken up in the natural course of events even under the most careful handling. You will break up more or less property at stations. There is more wear and tear on the equipment on the rails, and frogs, and wheels and brasses; the cars are injured more in local traffic than

in through service. The fuel bill I think as a rule is rather more on local runs than on the through runs, because it is nesessary to throw the engine over when under pressure, and the changing of the engine, switching about, tears the fire to pieces and the fuel is destroyed or rather wasted in that way. We don't get the economical value of it in local service.

Q. How in respect to casualties—personal injuries? A. My belief is that the casualties—injuries to persons are greater on local than on through trains. I should say there is no question about that. I think that the unavoidable injuries of that kind are greater in the movements about local stations, in proportion, than in the great terminal yards where we handle an enormous business.

Q. Then, in your opinion, the expense of handling and conducting local business is higher than that of conducting through business in practically every item of it, is it not? A. I believe that the necessary expense of conducting local business is greater in every item of expense than in the through business, and that it is possible to do only a portion of the business that is done by the through trains, and the revenue is therefore very much less. That is our experience.

Q. You have had, and are constantly having, experience, are you not, with what is known as maintenance of way? A. Yes, sir.

Q. Among the items that must be considered in maintenance of way are rails, ties, buildings and other parts of the railway that must be replaced or renewed or rebuilt from time to time; how often in your experience is it necessary to replace rails; in other words, what is the average life of a rail? A. Well, the average life of a rail depends in

the first place on the quality of a rail that it is. Then on the tonnage that moves over it, and as to the physical characteristics of the railroad, as to its grades and curves and the character of the soil on which it rests and which must be used in making the embankments and for surfacing the track, and all that sort of thing. We have tried to get the longest guaranty that we can from the rail manufacturers, that is to say, we endeavor to get the rail manufacturers to guarantee the effective life of rail in the track for a certain period, and the longest period that we have been able to get in our contracts with steel rail manufacturers is five years. Of course the life of a rail is much longer. The steel companies, as a rule, guarantee that as to rails except those laid at stations and where there is an unusual wear by reason of switching, etc.—that is one of the items of expense—that if the rail gives out after having been properly operated by the railroad company—that is, properly handled, inside of five years the rail mills will deliver a new rail for each rail so returned to them showing unusual wear. I think that on a line having some considerable through and local business that rails will last on an average of perhaps twelve years. We have lines where they do not last eight years, and we have lines where they last longer; some of them last eighteen or twenty years, but that is in places where traffic is very light, almost nothing; one small light train a day, perhaps.

Q. Mr. Earling testified that the average life of a rail in the State of South Dakota would not exceed sixteen years, or rather he allowed in his estimates in this examination sixteen years as the life of a rail; I will ask you to state whether or not in your opinion that is a fair estimate? A. In my best judgment, that is rather a liberal estimate. Of course, so far as our lines in South Dakota are concerned,

they are up and down hill. We have grades of 158 feet to the mile, and that in combination with sixteen-degree curves the wear is very rapid, but I should say that sixteen years was a very liberal allowance.

Q. For the life of a rail? A. Yes, sir; it is a liberal allowance on similar lines of ours, that is, lines that I take it to be about like his lines.

Q. You have prairie lines? A. Yes, sir.

Q. The Atchison, Topeka and Santa Fe is a prairie line from the Missouri river to the mountains, is it not? A. Yes, sir.

Q. And a large portion of the Burlington system is prairie line, is it not? A. By far the larger part.

Q. When you say that you think sixteen years is a liberal estimate for the life of a rail, you mean sixteen years is fully as long as a rail would live? A. Yes, sir; that, in my opinion, would be probably the extreme limit.

Q. Mr. Harris, in respect to the life of a tie; will you please give your opinion upon that subject? A. Well, we have various kinds of ties; we have oak ties that we buy in Illinois, others in Wisconsin and quite a large number in Missouri, and we get pine ties in South Dakota and Montana, and we buy cedar ties at various points, and these various ties all have different values and different qualities in respect to strength as well as resisting the elements, which is usually the most serious matter to be considered. The pine ties that we get in the western country, without burnetizing, last as a rule less than seven years; six years I should say would be a fair life for a pine tie unburnetized or without any preserving process. The cedar tie, if it does not cut through—if the flange of the rail does not cut into it so as to reduce its strength too much, will last from eight

to eleven years. I should say there was very little difference in the life of an oak tie. The cedar tie has greater powers of resistance to the disintegrating elements in the atmosphere, but it is weaker, and there is not much difference—that is, between the life of an oak and a cedar tie in the dry climates in the trans-Missouri country.

Q. Mr. Earling put the average life of a tie in South Dakota at ten years; I will ask you to state whether in your opinion that is a fair estimate? A. I said from eight to eleven years; I should say about ten years would be a fair estimate and as near the facts as I could give from memory. Of course, if the tie even has great resistance to the atmospheric elements, is it cut up by the spikes in a little while so that it is almost destroyed. A spike is 5½ by 9-16 inches, that is, it is five and one-half inches long by nine-sixteenth inches square, and a tie usually has a face of six inches, so when the tie is spiked on each side of the rail it has eighteen-sixteenths inches cut out of the face of the tie, or one and one-eighth inches out of the width of it. Then, if it is necessary to pick it up and turn it over and handle it again, it has got to be spiked in another place; there are then four spike holes in it on each side, each one nine-sixteenths of an inch square, and they sometimes cut through the tie so that it is weakened by being cut through by the spikes, as well as by the flanges of the rail, and is destroyed by the disintegrating elements in the atmosphere.

Q. Mr. Harris, state whether in the operation of a railway it is necessary from time to time to make expenditures for the repairing and maintenance of buildings such as stations, water tanks and structures of all kinds and stock yards? A. Buildings, you say, and structures of all kinds; do you refer to bridges?

Q. No, not including bridges? A. You mean stock yards,

station buildings, shops, roundhouses and everything of that kind?

Q. Yes, and turn-tables, etc.? A. Well, there is a very material difference in the life of the various structures. A platform, for instance, rests on the ground and it is being continually repaired and every once in a while it has to be entirely renewed—I can't say how often, but I should say we renew out platforms every seven or eight years and repair them all of the time besides.

Q. If they were not constantly repaired, they would wear out entirely very much sooner than they do, would they not? A. Yes, sir; they have pretty rough usage and they are worn out and rot out very rapidly.

Q. And in order to preserve and maintain these various structures it is necessary to incur frequent expenses for their preservation. A. It is a continual expense, of course.

Q. Mr. Earling estimated that it was necessary to incur an expense of five per cent. on their value each year or a complete renewal once in twenty years; I will ask you to state whether in your opinion that is or is not a fair estimate? A. Well, that is not in accordance with my opinion as to the facts. I think the wear and decay on platforms is very great, and I believe that structures of that kind are replaced entirely in value in certainly not to exceed twelve years. Some things are replaced several times; others last longer.

Q. Then Mr. Earling's estimate is entirely within the facts? A. I should consider it so, without any question; I should not have any question in my mind about that.

Q. Mr. Earling testified that the fences required to be rebuilt on an average every fifteen years; I will ask you to state whether in your opinion that is a fair estimate? A.

I think that is about right. Of course you take fences on a railroad; there are some places where the posts become loose in the ground and are subject to being broken, and others where they are destroyed, rot out or are burned by fires. They very frequently burn up, and in low places they are washed away, and my notion about it is that the fence is probably entirely replaced inside of the period named.

Q. The operating expenses of the Chicago, Milwaukee and St. Paul Railway Company for the fiscal year ending June 30, 1897, were sixty and ninety-four hundredths per cent. of the gross earnings; I will ask you to state from your experience as a railway manager and from your acquaintance with the Chicago, Milwaukee and St. Paul Railway system whether that is a fair and reasonable proportion between expenses and earnings? A. I suppose you desire to know whether if the expenses were sixty per cent. of the revenue, whether it was operated as economically as may be and well maintained?

Q. Yes; that is what I mean. A. I should say it was entirely so.

Q. If the operating expenses of the entire railway system, situated as the St. Paul system is, were sixty per cent. and a fraction over would the operating expenses of the purely local traffic in a state like South Dakota be less or more than sixty and a fraction per cent? A. I should say it would be a great deal more.

Q. Can you form any opinion, or can you give any opinion without having the actual figures before you as to what the operating expenses would be for conducting a local business in a state like South Dakota if the operating expenses for the entire system were sixty and ninety-four hundredths per cent. of the gross earnings? A. I do not think that my

ideas are sufficiently definite on that subject to testify, or to justify me in giving a figure. The tonnage being more or less light, and the expenses being high on the local traffic, I do not know that I can adjust those elements sufficiently just now to make a definite reply to that question. I feel certain that the expenses would be very much more, away out of any such proportion as that, but I can't say how much. It would be utterly impossible to bring the relation to any such percentage, I feel satisfied.

Q. Is it or is it not true within your knowledge that the earnings from local traffic in many of the sparsely settled localities in the west are insufficient to net the company any revenue whatever above the expenses of conducting the traffic? A. I have no doubt but that there is a great deal of local traffic which not only does not give net returns, but must, in the nature of things, be some little expense, but that is pretty difficult to exactly determine, because there may be more or less of this class of freight in a period and it is impossible on any railroad to adjust the charges so that the small pick-up stuff will always show a profit. If they did, in my opinion a good deal of that stuff would be brought in at rates that would be almost prohibitory. People would find the ordinary necessaries of life greatly increased in cost. It would not tend to build up communities or encourage settlement.

Cross-Examination by Mr. Null.

Q. Mr. Harris, as I understand it, you say that the local business is more expensive per ton per mile by reason of the fact that the train is not loaded for the whole haul? A. That is only one of the elements of cost—one of the elements which increases the cost. The platforms are worn out with local traffic, station buildings are used for that purpose,

frogs and switches are used up more with local traffic than with through traffic, and as I told you with reference to the rails, the rail manufacturers always specify that as to rails laid between switches they won't even guarantee them five years of life. They provide against that, and we take our own chances on them. That is simply on account of switching.

Q. So, then, as to the question of the durability of rails within the station yards, the average is lower than the length of life of rails laid between stations? A. Yes, sir.

Q. Is there any difference in the handling of purely local freight and through freight after it has become local? For instance, if a consignment of through freight is carried from Chicago to Mitchell, and there the consignment is broken up and distributed and it becomes local from there out to the various stations throughout the state, is there any difference in the cost of handling that from the distributing point to destination than there is in the handling of other local freight? A. No; do you mean a certain consignment of freight carried on local trains, as to whether that differs from any other consignment carried on the same train?

Q. No; I understand you to say it is a fact that each train stops at stations and switches and takes on and puts off freight and that is what increases the expense? A. Yes, that increases the expense.

Q. That would be the same with reference to through freight from the point where it ceases to be through freight in being distributed? A. Whenever it becomes local freight it is more expensive to receive and to handle it because it can only be taken in a small volume; the engines cannot haul their full tonnage, and the same crew that handles a full train has to be employed to handle the light trains that

are nesessarily run in handling and taking care of local freight.

Q. So that if all of the freight traffic in South Dakota consisted either of local shipments originating in the state from the one hand and the distributing of freight from outside of the state or the collection of freight going outside of the state, would there be any difference in the cost of handling? A. I don't know as I exactly understand your question.

Q. The question is this, Mr. Harris, is there any difference in the cost of handling of freight that is local, through from originating point to destination, as against the handling of through freight after it has become local? A. Well, I would like to answer your question clearly, and will, as near as I can. There is a very distinct and decided difference between the cost of handling through and local freight. By local freight, as commonly termed, I suppose you to mean ordinary local freight and baggage or small consignments destined to local points, and it has got a long trip to make. When it starts on its march from originating point to destination it may be through freight for 1,500 miles, loaded with hundreds of tons of other freight, and in that case the engine pulls its load and it goes through without stopping, and it is in fact through freight. When that is separated at the point of distribution, when you commence to do business at retail, in other words, instead of at wholesale, your extra expense added to the retail trade takes hold. Wherever that would commence, why, you have to commence to unload and switch. Wherever you can handle that freight in train-load lots, the engine can haul its capacity and run from the starting point with a full train, and run to its destination without the necessity of switch-

ing at stations and receiving and discharging cargoes to and from the cars, that is what I mean by through freight.

Q. If the cost of handling all classes of freight, both through and local, were we will say 20 cents per 100 miles for a ton, then your judgment would be that it would be 60 cents for a ton 100 miles for local freight? A. In proportion to the cost of the force employed for that purpose to do the work, etc., why, I think that would be a very moderate estimate.

Q. If upon the system of the Chicago, Milwaukee and St. Paul Railway there is a uniform schedule for engineers, firemen, conductors and brakemen, then your remarks with reference to increase for handling local freight would have no application? A. Certainly not, if we didn't pay any more.

Q. I understand that the rates are uniform? A. I do not know, Mr. Null; I do not want to testify on that point; I am not posted upon, but it is an universal practice to pay more in one form or another for local freight, either by allowance of time, or in some other form.

Q. I understood you to say that the life of a rail depended somewhat on the tonnage which passes over it? A. Yes, sir; that is one of the elements. Of course the life of a rail also depends upon the character of the steel composing it, the manner in which it is treated while in service and the amount of wear it receives—friction from the passing wheels, as to whether it is on a straight line or on a curve or a grade.

Q. What would you say would be the average life of a sixty-pound steel rail of good quality, laid in a track in which the grades and curves were nominal, that is to say, a level track so far as it is possible to have a level and straight track with gravel ballast and over which two

passenger trains per day pass, the trains consisting of engine, a combination mail and express car, smoking car and one other car, and two freight trains a day carrying on an average of about 100 tons of freight? A. Well, I should say that that rail might last if it was well ballasted and tied and maintained, fifteen to seventeen years. It might last longer in some cases, and in some cases a shorter period. Of course rails may be of different hardness and the ends will batter sometimes apparently without provocation, and where they are apparently properly treated, and we have to take them out before we get their full length of life in running trains over them at often a very moderate rate of speed.

Q. That is, I suppose, the speed of trains has something to do with the life of a rail? A. Yes, sir.

Q. In the construction of railways, or in the relaying of rails where the relaying is quite extensive, are the rails laid in the same season that they are manufactured? A. There is no rule about that, and it is done according to the convenience of the parties; they are not necessarily so laid, but they might be.

Q. What is your experience? A. We have had rails that we have had on hand, that have laid on the piles for years that we expected to use, but we have used others that came along.

Q. I ask you with reference to construction or ordinary laying, not repairing? A. I don't know that there is any rule about it that would govern except that of convenience.

Q. They might possibly lay over one season if ordered in the fall? A. Yes, sir.

Q. So that ordinarily the date of rails, where they seem to be uniform for some miles, would be an indication of the

time they have been in place? A. No; because very frequently we take up rails from one part of the road and send them to the rail mill and have them cut and re-rolled, and in other cases we simply have the ends cut off and take away the battered end, and lay the rail on a side line.

Q. If the rail should bear the date of 1870, say, and be found in the track between stations to a considerable extent, that is, for several miles, in a body, that would be grounds for the reasonable assumption that the rail had been in use since 1870 or thereabouts, would it not? A. Yes; although you cannot tell anything about it. It might have been in use for a considerable part of that time, and it may have been re-rolled or changed over again, the ends cut. We have got rails in place—once in a while we find a brand that runs back for twenty years, but they are very rare. We are mighty glad to see it and we generally take a piece of it and analyze it and find out what its chemical contents are and test it physically to find out what sort of steel it is to enable us to specify that quality to the manufacturers.

Q. Does the re-rolling process put a new brand on the rail? A. I can't tell you about that; I don't think it does. I think the rail, the head, the flange and the marks on the webb are undisturbed, but I am not certain about that. That is my impression—that is my impression, that I have seen that on some that we have had re-rolled. The re-rolling of steel rails is of comparatively recent origin; iron rails have always been in vogue.

Q. Can you give us any idea of the average tonnage which a sixty-pound steel rail is supposed to carry? A. I cannot—that is, its track strain or its lateral strength?

Q. Its wear? A. No; it depends altogether on circumstances; it depends on how it has been maintained and the

labor that has been put on it, the material of which the track is composed, whether it is badly spiked or well spiked and all that sort of thing, and generally as to its treatment in service.

Q. You spoke of ties being treated by some process; what is the expense of that treatment? A. Well, that very much depends on the amount of labor and the chemicals that are used for that purpose. I have heard of their being treated I think at as low a cost as eighteen cents apiece, and have also heard of their costing as high as 25 cents apiece, but I won't attempt to be exact as to those figures.

Q. What is supposed to be the life of a tie after it has been subjected to that treatment? A. Well, the life of a pine tie will probably be almost although not equal to that of an oak tie; a few years less as a rule, I believe.

Q. How many years is it supposed that an oak tie will last after it has been subjected to that treatment? A. They don't treat oak ties, so far as I know; they treat cedar ties and pine ties partly to preserve them from disintegration and partly to give them greater weight. Forcing the chemicals into the pores of the wood gives the tie a little bit more weight, and it corrodes the spikes when they are driven in, so they do not slip quite so easily.

Q. You spoke of repairs of buildings and stated that within a given time the repairs would be equal to the original cost of the building; to what particular repairs do you refer as regards buildings? A. Well, I think the total cost of all repairs on the buildings within that period will equal their cost. So that they are practically replaced so far as money is concerned within that period.

Q. Suppose that the lines of the Chicago, Milwaukee and

St. Paul road constructed in the State of South Dakota, being constructed from the year 1886 to 1897, that its depots had never been repainted, reshingled or the floors relaid, what would you say had been the repairs expended upon them? A. Well, I could not say; I never heard of such a case. If you had not done anything on them, it would not have cost you anything. On the other hand, if you had done anything, it would have cost you some money, and of course I was never in such a place, and I never heard of such a place, where platforms and such things do not wear out. The expenses of renewing depot platforms is one of the great and expensive problems that railway managements have to consider and contend with.

Q. I have reference solely to depot buildings? A. You take the whole building structure by itself, the windows are broken and the hardware about the building is broken or torn off and lost and a good many things have to be done all of the time. This all costs money. We find it so.

Q. That has reference to the depot buildings? A. Yes, the principal expenses in the maintenance of frame depots would be in keeping them painted, re-roofing, relaying floors.

Q. Is this done by a particular gang that is engaged for this particular work? A. The carpenter gangs, of course, go back and forth over the roads all of the time. They stop a little while at one place and a little time at another place, wherever they are needed most, and while they do not live at any one of those places, they are on our pay-roll and are expending time and labor and material on them all of that time. This all costs money.

Q. And in the usual and ordinary management of railroads, there is a gang of carpenters whose time is devoted

to these general repairs and who are regularly upon the pay-rolls of the company? A. Yes, sir; it is generally done by men of that kind, but it is sometimes done by men of course who do other work; bridge men and building men repair all sorts of structures.

Q. How many miles of road is it usual to assign to a carpenter crew that does this general repairing? A. There is no rule about that. They do the best they can with it. They have a small force, and they keep going; send them where they are most needed.

April 5, 1898. 10 o'clock a. m

By agreement of parties to this suit, the taking of evidence was continued until April 27, 1898, at 2 o'clock p. m., at Sioux Falls, South Dakota.

DEFENDANTS' TESTIMONY.

April 27, 1898, 10 o'clock a. m.

Evidence on behalf of the defendants, taken before L. W. Crofoot, special examiner, at the office of the Board of Railway Commissioners of the State of South Dakota, in the City of Sioux Falls, County of Minnehaha, State of South Dakota, on April 27, 1898, at the hour of 10 o'clock in the forenoon of said day, pursuant to the agreement of the solicitors of both parties. The defendants appearing by T. H. Null, Esq., and W. O. Temple, Esq., their solicitors, and the complainant appearing by A. B. Kittredge, Esq., its solicitor.

R. J. BOOTH, being called as a witness on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Booth, where do you reside? A. Sioux Falls.

Q. What business are you engaged in? A. Contracting and building.

Q. You are a carpenter by trade? A. Yes, sir.

Q. How many years have you resided in Sioux Falls? A. twenty-seven years.

Q. How many years have you been engaged in carpentering, contracting and building in Sioux Falls, South Dakota? A. About eighteen years.

Q. How many years have you been engaged in the carpentering business? A. I have been in the carpenter business for about twenty-four years—something like that.

Q. During this period of about eighteen years, you have been engaged in the contracting and building business—what class of buildings have you been engaged in contracting and building? A. Almost all classes of buildings—both wood and stone and brick.

Q. In your contracting, have you contracted both work and materials? A. Yes, sir.

Q. And during these eighteen years have you been familiar with the market value of material used in the construction of wooden, frame and brick buildings? A. Yes, sir.

Q. And structures? A. Yes, sir.

Q. Are you familiar with the markets and with the dealers in these materials from which you could inform yourself as to the market value of materials at this or any other given time? A. Yes, sir; with most of the materials.

Q. I will ask you if you are familiar with the lines of railway operated by the Chicago, Milwaukee and St. Paul Railway Company in the State of South Dakota? A. I am somewhat familiar with them. I have been over some of their lines, but not all of them.

Q. You know in a general way what cities and towns are reached by that line; that is, in a general way? A. Yes, sir.

Q. I will ask you whether or not you are familiar with their station at Egan, South Dakota? A. Yes, sir.

Q. You have been there frequently? I think I have been there three times.

Q. Are there any other lines of railway there except the Chicago, Milwaukee and St. Paul Railway? A. No, sir.

Q. I will ask you if the Railway Commissioners of South Dakota requested you to make an estimate of buildings and structures on the lines of the Milwaukee road? A. Yes, sir.

Q. And have you done so? A. I have.

Q. And did you make an estimate of the buildings and structures of the Milwaukee Railway Company at Egan, South Dakota? A. Yes, sir.

Q. At the time they requested you to make these estimates, did they exhibit to you Mr. Onward Bates' list of the buildings and structures at these several stations? A. Yes, sir; they gave me a list of that kind.

Paper marked by special examiner, "Defendants' Exhibit 37."

Q. I show you paper marked Defendants' Exhibit "37" and ask you if that is a summary of your estimate of the buildings and structures of the buildings of the Chicago, and Milwaukee Railway at their Egan station? A. Yes, sir; it is; they are my figures.

Q. I will ask you if you have a detailed statement showing the items in detail that comprise this summary? A. I have.

Q. In estimating the station house at fourteen hundred and sixteen dollars, at what figure did you rate the labor and material. (Witness referring to detailed statement.) Just refer to your details and tell us how much you estimate for dimension stuff and how much for standard flooring? A. The framing lumber throughout I estimate at $18 per thousand. Well, there is a number of them. Shall I give them all?

Q. Yes, sir. A. The floor lining estimated at $16 per

thousand. The hard wood floors are estimated at $30 per thousand. Plank for plank floor, $16 a thousand. Six-inch flooring for second story, $20 per thousand. Roof boards, $14 per thousand. Shingles, $2.50 per thousand. Sheathing, $14 per thousand. Half inch siding, $26 per thousand. The straw board that was used—straw board paper, was estimated at $1 per roll. The ceiling that was used in ceiling them up was estimated at $20 per thousand. That is all of the details in that list.

Q. At what rate did you estimate the platform? A. I estimated the platform at 10 cents per square foot, complete.

Q. And have you made a detailed estimate of each of the items upon this exhibit showing the cost of the buildings and structures at the Egan station—Exhibit 37? A. Yes, sir.

Q. So that you can, if asked to do so, state the items constituting the cost of each one of them? A. Yes, sir.

Mr. Null: We offer Defendants' Exhibit "37" in evidence.

Defendants' Exhibit 37 received.

Q. In making the estimate on a station building and on the platform, did you include any portion of the platform in the estimate of the building? A. No, sir.

Q. Did you find at the station at Egan any sand house? A. No, sir.

Q. Did you find at that station any coal house? A. No, sir.

Q. In using the price that you did for the labor and material entering into these structures, what market are they placed at? A. On the markets at the stations where the buildings are built.

Q. And in making these estimates, what did you figure on the value of the building, or what it would cost to construct them now? A. What it would cost to construct them now?

Q. I will ask you if you made an estimate of the buildings and structures of the complainant railway company at their Woonsocket station? A. Yes, sir.

Defendants' Exhibit "38" marked for identification.

Q. I show you Defendants' Exhibit "38" and ask you if that contains a statement of the buildings and structures that you found at that station? A. Yes, sir; it does.

Q. And does it contain a statement of the amount at which you estimated the several buildings? A. Yes, sir.

Q. And structures? A. Yes, air.

Q. At the Woonsocket station did you find a car repair shop? A. No, sir; none there.

Q. Did you find a cold storage house? A. No, sir; none there.

Q. I will ask you if you examined the stock yards at several stations of the company in South Dakota? A. Yes, sir.

Q. Did you find any planking or paving in the stock yards? A. No, sir; not in any of them.

Q. How are those stock yards constructed? A. They are constructed with heavy cedar posts and in some places with six-inch boards, and in others with two-inch railing.

Defendants' Exhibits 39, 40, 41, 42 and 43 marked for identification.

Q. So that in estimating the stock yards you simply estimate the fences, the shed and the chute or way for the stock to be driven onto the cars? A. Yes, sir; and includ-

ing, when they have scales, including the scales and their feed trough and watering trough and water supply. That is all included in my stock yard estimate.

Defendants' Exhibit "43" marked for identification.

Q. I show you a photograph of the complainant's station at Wolsey, South Dakota, and ask you if that station at Woonsocket is similar to the photograph which I show you—to the one in the photograph? A. Yes, sir; it is.

Q. And it is what is known as a standard station? A. Yes, sir.

Defendants' Exhibit "44" marked for identification.

Q. I show you Defendants' Exhibit No. "44" and ask you to state what that represents? A. It represents what they designate as their tool house.

Q. And what is commonly known as a hand-car house? A. Yes, sir.

Q. But designated here as a tool house? A. Yes, sir.

Q. And in the estimate you have made here of the tool houses at the several stations, exhibit 44 is a photograph of one of such buildings? A. Yes, sir.

Defendants' Exhibit "45" marked for identification.

Q. I show you Defendants' Exhibit "45," and ask you to tell us what that represents? A. It represents one of their standard coal and oil houses.

Q. And such as you used in estimating the cost of building known as coal and oil houses? A. Yes, sir; the same thing.

Q. I show you Defendants' Exhibit No. "46," and ask you what that represents?

Defendants' Exhibit "46" marked for identification.

A. It represents complainant's water station, wind wheel and tank, I would call it.

Q. And it is a representation of such water stations as you have estimated the cost of? A. Yes, sir.

Q. I will ask you if you took any measurements of the wind mill? A. Some of them I did; yes, sir.

Q. And what was the result of your measurement with reference to the size of the wheel? A. Sixteen-foot wheel. I do not think I found any over sixteen feet.

Q. How many wheels did you measure? A. Two—three; I will change that.

Defendants' Exhibit "47" marked for identification.

Q. I show you Defendants' Exhibit No. 47, and ask you what that represents? A. It represents one of complainant's outhouses.

Q. Is that similiar to the outhouses included in the estimate of buildings and structures at the Woonsocket station? A. Yes, sir; they have one there. In their list it is designated as an outhouse.

Defendants' Exhibit "48" marked for identification.

Q. I show you Exhibit 48, and ask you what that represents? A. That represents outhouses that they have at about one-third of their stations.

Q. And did you make an estimate of such a structure as that shown in Exhibit 48 in any of the estimates that you have here? A. Yes, sir.

Q. At what station? A. Vilas.

Q. I show you Exhibit "49," and ask you what that represents?

Defendants' Exhibit "49" marked for identification.

A. It represents their engine house at Sioux Falls.

Q. And is that building included in your estimate of structures at the Sioux Falls station? A. It is.

Defendants' Exhibit " 50 " marked for identification.

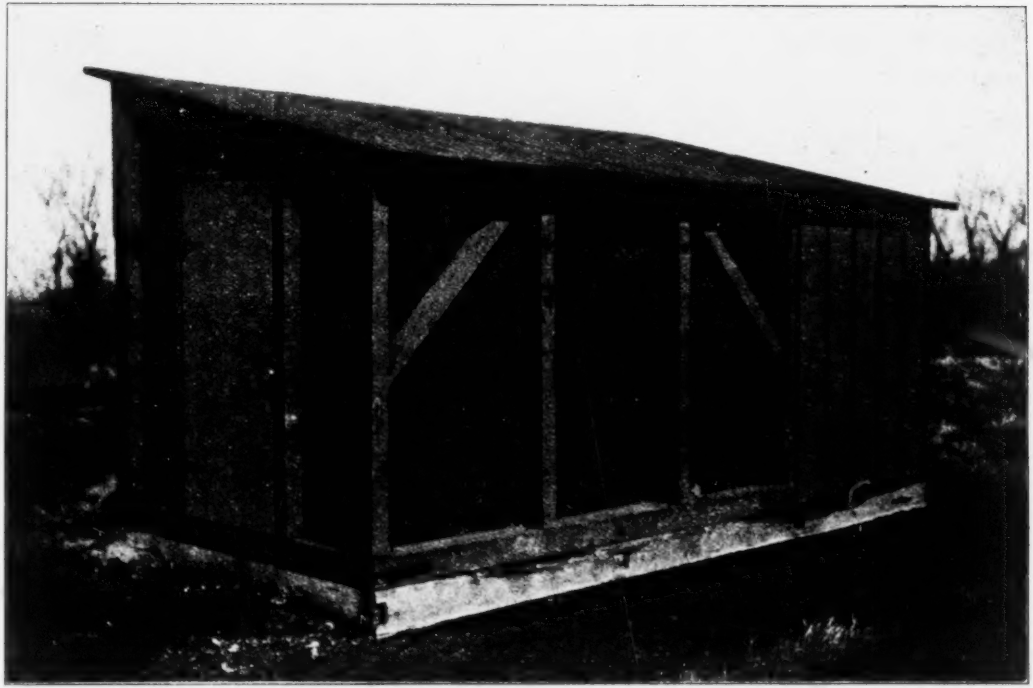
Q. I show you Defendants' Exhibit 50, and ask you what that represents? A. It represents the plaintiff's station at Vilas.

Q. And have you made an estimate of the company's buildings at Vilas? A. I have.

Mr. Null: At this time the defendants offer in evidence Defendants' Exhibits 43 to 50, inclusive, being photographs of the several buildings.

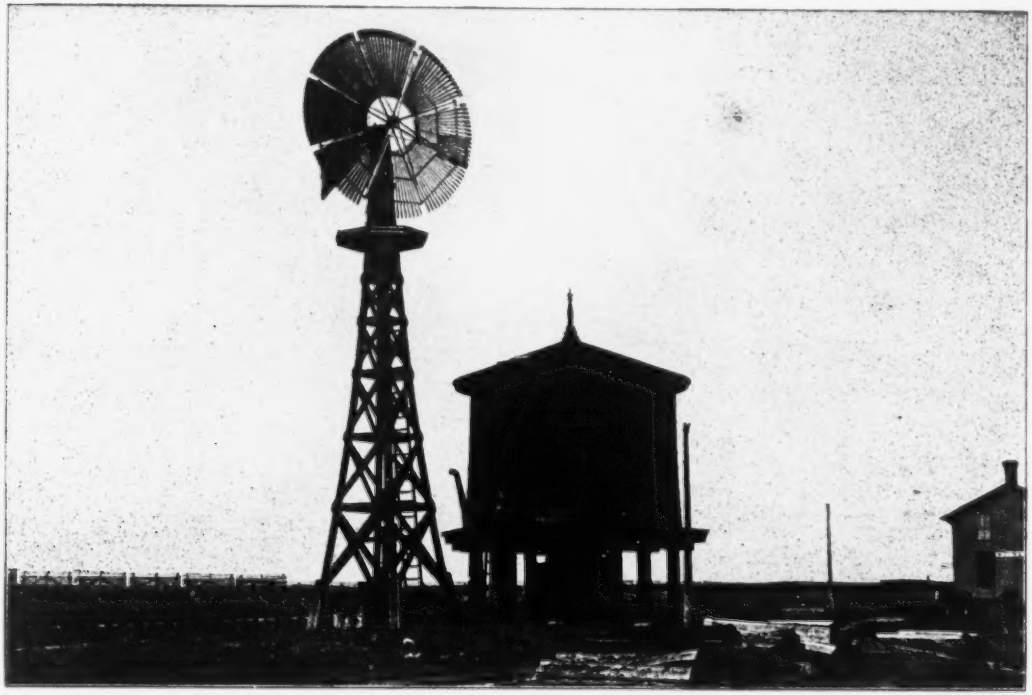
DEFENDANTS' EXHIBIT 43.

DEFENDANTS' EXHIBIT 44.



DEFENDANTS' EXHIBIT 45.

2390

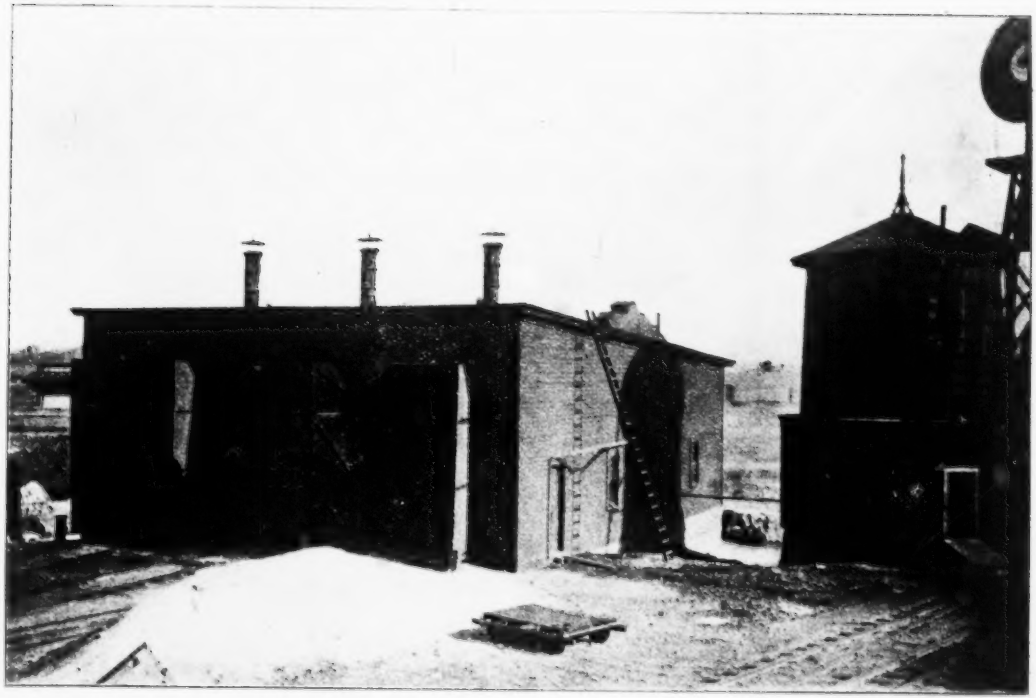


DEFENDANTS' EXHIBIT 46.

DEFENDANTS' EXHIBIT 47.

1682

DEFENDANTS' EXHIBIT 48.



DEFENDANTS' EXHIBIT 49.

2892

DEFENDANTS' EXHIBIT 50.

Mr. Kittredge: I object to their receipt in evidence on the ground they are incompetent and immaterial.

Q. I show you Defendants' Exhibit "39," and ask you if that is an estimate of the buildings which you found at the complainant's station at Harrisburg, South Dakota? A. Yes, sir; it is.

Q. Did you visit the several stations at which you have made estimates? A. Yes, sir.

Q. And examine the buildings? A. Yes, sir.

Q. Taking such measurements as were necessary to make the estimates? A. Yes, sir.

Q. And your estimate is based upon the class of material found in the buildings? A. It is based really on a better class of material then I found in the structures.

Q. And it is based upon what it would cost to construct them now? A. Yes, sir.

Q. Did you make an estimate of the buildings at the complainant's station at Vilas? A. Yes, sir; I did.

Q. I show you Exhibit No. "40," and ask you if that is the estimate? A. Yes, sir.

Q. I will ask you if you inspected the buildings of the company at their Sioux Falls station? A. Yes, sir.

Q. And did you make an estimate of all their buildings you found at that station? A. Yes, sir.

Q. Did you find any hard coal shed? A. No, sir. Understand, in stations where they claim a coal and oil house and hard coal shed, they are both one. They have a building that is called a coal and oil house, I believe, and that is used for the hard coal shed too. They are designated as two buildings, but there is only one.

Q. I show you Defendants' Exhibit 41, and ask you if that is the estimate of the building found at the Sioux Falls station—the estimates which you made? A. Yes, sir; it is.

Q. Did you inspect the company's buildings and structures at their Mitchell, South Dakota, station? A. I did.

Q. And did you make an estimate of all buildings and structures you found at Mitchell belonging to that station? A. Yes, sir.

Q. I show you Exhibit 42, and ask you if that is the estimate? A. It is.

Mr. Null: We now offer in evidence Defendants' Exhibits 37 to 42 inclusive.

DEFENDANTS' EXHIBIT 37.

R. J. BOOTH,

Contractor and Builder.

Dealer in Lumber, Sash, Doors, Mouldings, Mill Work, Storm Windows and Screens.

Estimates furnished on Wood, Stone and Brick Buildings.

Office between Eighth and Ninth Street.

Rear of Cataract House.

Sioux Falls, S. D., ...189...

EGAN:

Contract price of buildings, C., M. & St. P. Ry., at Egan, S. D.

Station	$ 1,416 00	
Platform	523 00	
Out house	52 00	
Tool house / Car repair house } in one building	69 00	
Sand house—none		
Coal house—none		
Ice house	232 00	
Transfer platform	194 00	
Engine & coal shed	1,784 00	
Turn table	894 00	
Track scales	800 00	
Water tank	988 00	
Wind mill	370 00	
Well	140 00	
Steam pump	365 00	
Pump house	125 00	
Stock yard & shed	167 00	
Engine house	2,505 00	
		$10,624 00

DEFENDANTS' EXHIBIT 38.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work, Storm Windows and Screens.
Estimates furnished on Wood, Stone and Brick Buildings.
Office between Eighth and Ninth Street.
Rear of Cataract House.

Sioux Falls, S. D.,.....189...

WOONSOCKET:

Contract price of buildings, C., M. & St. P. Ry., at Woonsocket, S. D.

Station	$1,532 00	
Platform	507 00	
Out house	32 00	
1 double tool house	65 00	
1 tool house	40 00	
Car repair shop—none		
Ice house	177 00	
Cold storage—none		
Coal shed, derrick, buckets, etc	1,257 00	
Engine house	2,373 00	
Water tank	988 00	
Wind mill	370 00	
Well	750 00	
Stock yards—scale and water supply	670 00	
		$8,761 00

DEFENDANTS' EXHIBIT 39.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work,
Storm Windows and Screens.
Estimates furnished on Wood, Stone, and Brick Buildings.
Office between Eighth and Ninth Street,
Rear Cataract House.

Sioux Falls, S. D., Feb. 19, 1898.

HARRISBURG:

Contract price of buildings on C., M. & St. P. R'y at Harrisburg, S. D.

Station	$ 561 92	
Platforms	66 06	
Tool house	40 00	
Mail crane	20 00	
Stock yds. & sheds	149 25	
		$837 23

DEFENDANTS' EXHIBIT 40.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work,
Storm Windows and Screens.
Estimates furnished on Wood, Stone and Brick Buildings.
Office between Eighth and Ninth Street,
Rear of Cataract House.

Sioux Falls, S. D., ... .189...

VILAS:

Contract price of buildings on C., M. & St. P. Ry. at Vilas, S. D.

Station	$ 945 00	
Platform	245 00	
Out house	21 00	
Stock-chute	20 00	
		$1,231 00

DEFENDANTS' EXHIBIT 41.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work, Storm Windows and Screens.
Estimates furnished on Wood, Stone and Brick Buildings.
Office between Eighth and Ninth Streets,
Rear of Cataract House.

Sioux Falls, S. D.....189..

SIOUX FALLS:

Contract price of buildings on C., M. & St. P. Ry. at Sioux Falls, S. D.

Station	$ 7,191 00	
Freight house	4,714 00	
Platform	1,152 00	
C. & O. house	58 00	
Out house	40 00	
2 tool houses	80 00	
Coal sheds with derricks, buckets, etc..	1,322 00	
Water tank	988 00	
Pump house	60 00	
Wind mill	470 00	
Water Pipes and sewers	250 00	
Track scales	800 00	
Hard coal shed—none		
Ice house	181 00	
Engine house	3,153 00	
Turn table	894 00	
Stock yards	90 00	
Extra for grading	500 00	
		$21,943 00

DEFENDANTS' EXHIBIT 42.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work, Storm Windows and Screens.
Estimates furnished on Wood, Stone and Brick Buildings.
Office between Eighth and Ninth Streets,
Rear of Cataract House.

Sioux Falls, S. D.....189

MITCHELL:

Contract price of buildings, C., M. & St. P. Ry., at Mitchell, S. D.

Station	$ 1,852 00
Platform, planking and sidewalk	1,119 92
Freight house	890 00
Coal and oil house	58 00
Out house—4 parts	80 00
3 tool houses	120 00
Engine house	16,187 00
Engines, boilers and machinery	6,295 00
Steel turn table	1,634 00
Coal sheds, cranes, buckets, etc	1,896 00
Tank	988 00
Pump house	192 00
Pump—complete and set	500 00
Well	600 00
Piping	1,500 00
Track scales	800 00
Oil house	340 00
Blacksmith shop	300 00
Car repair shop	249 88

Coal house (standard)	58 00	
Out house	77 40	
Roadmaster's office	62 60	
Coal storage shed	177 60	
Ice house	601 52	
Machinery—derrick and platform	404 00	
Tool house	40 00	
Steam heating	1,230 00	
Cinder pits	267 00	
Stock yards, sheds, scales and water	700 00	
		$39,289 92

Mr. Kittredge: Objected to for the reason they are incompetent and immaterial.

Q. I will ask you if there were placed in your hands two blue print plans of what is denominated a standard station house of the Chicago, Milwaukee and St. Paul Railway Company? A. There was.

Q. From whom did you receive the plans? A. I received them from Mr. La Follette.

Q. Mr. La Follette? A. Yes, sir.

Q. And these blue prints which I have in my hands are the plans you received of him? A. Yes, sir; they are.

Q. Now, have you made a detailed estimate of the cost of constructing such a station house? A. I have.

Q. Will you produce the estimate? (Witness produces the estimate and it is marked "Defendants' Exhibti 51".) This shows in detail the material and labor going into the construction of such a building? A. It does, and also the contractor's profit.

Q. In making this estimate did you take into consideration the style of construction and the character of the ma-

terial which you found by examination of what they term their standard depot in South Dakota? A. I did.

Q. And what market did you use as the basis for fixing the cost of the material? A. The market at the station where the buildings were built. In the standard stations I figured at the Sioux Falls market.

Q. Does this estimate include any platforms? A. Yes, sir.

Q. It includes the platform shown by the plans? A. Yes, sir.

Mr. Null: We offer in evidence "Defendants' Exhibit 51."

Mr. Kittredge: Objected to as incompetent and immaterial.

DEFENDANTS' EXHIBIT 51.

R. J. BOOTH,
Contractor and Builder.
Dealer in Lumber, Sash, Doors, Mouldings, Mill Work, Storm Windows and Screens.
Estimates furnished on Wood, Stone and Brick Buildings.
Office between Eighth and Ninth Street,
Rear of Cataract House.

Sioux Falls, S. D., ... 189...

Standard station—ceiled & as per plans.

4 cd. stone work @ $16		$ 64 00
Excavating for footings		5 00
108 lin. ft. 8 x 10 sills	720	
2 8 x 10-22 girders	294	
4 8 x 10-24 girders F. R.	640	
80 ft. lin. M. 8 x 10 sill F. R.	532	
24 pcs. 2 x 10-20 joist W. R.	800	
32 " 2 x 10-20-joist F. R.	1,067	
25 " 2 x 12-24-joist over W. R.	1,200	
25 " 2 x 6-20-C. J. W. R.	500	
50 " 2 x 6-16-rafters, W. R.	800	
42 " 2 " 6-16-rafters F. R.	672	
12 " 2 x 6-24-C. J. rafters, F. R.	288	
20 " 1 x 6-16-roof ties	160	
48 " 2 x 6-18-S. studs	864	
36 " 2 x 6-20-E. studs	720	
42 " 2 x 6-12-S. S.	504	
18 " 2 x 6-16-E. S	288	
40 " 2 x 4-16-studs-2 story P	427	
140 lin. ft. 4 x 6 plates	280	

25 pcs. 2 x 6-12-studs, 1 story P..... (at $18.00)	300	11,056	$199 00
6-2 x 6-16 plates partition.....	96		
10-2 x 4-16 plates partition.....	106		
500 ft. timber for posts freight room....	500		
	——	702	
		18 00	12 60
720 ft. floor lining.....		16 00	11 52
1,000 ft. hard pine floor or maple.....		30 00	30 00
2,000 ft. 2 in. plank floor freight R.....		16 00	32 00
900 ft. 6 in. floor over W. room.....		20 00	18 00
2,500 ft. roof bds.....		14 00	35 00
20 M shingles.....		2 50	50 00
2,000 ft. sheathing main part.....		14 00	28 00
1,100 ft. freight room sheathing.....		14 00	15 40
3,200 ft. ½ x 6 siding.....		20 00	64 00
6 rolls straw board.....		1 00	6 00
300 ft. cornice 4 ft. to ft. 1,200 ft.....		20 00	24 00
300 ft. c. mo. & 300 bed mo. 1 & 3 4.....			12 00
6,000 ft. ceiling m & v.....		20 00	120 00
1,000 ft. ¾ ¼ 0.....		60	6 00
18 windows.....		7 00	126 00
11 doors.....		6 00	66 00
2 slide doors & T.....		10 00	20 00
1 flt. stairs.....		20 00	20 00
1 slide wicket & shelves 3 x 3 3.....			4 00
2 chimneys 21 ft.-o each.....		1 25	52 00
17 brackets 18 x 24 x 4.....		1 00	17 00
1 Bay extra wor: & mat.....			25 00
Corner beds & belting.....			10 00
Nails, 12 kegs.....			30 00
Paint, 1,000 yds.....		14	140 00
12 M ft. pan to pt. in $5 per M. for labor			60 00

Cutting & placing timber foundation . .		10 00
7½ sq. ft. floor lining, ...	40	4 00
7½ sq. ft. H. pine floor to lay, ...	1 00	7 50
10 sq. ft. plant flo	50	5 00
9 sq. ft. 6 in-plant floor	60	5 40
25 sq. ft. roof	40	10 00
20 M shingles	75	15 00
31 sq. ft. sheathing	40	12 40
26 sq ft. siding	70	18 20
300 ft. cornice.....	10	30 00
60 sq. ft. ceiling.....	70	42 00
$1,600 00.		$ 1,461 52
10 %.....		140 00
Standard as per plans.....		$ 1,601 52
2,674 sq. ft. platform around station (10)..		267 40

Q. In making your estimate upon these standard depots, did you make the estimate with reference to the construction of a single building, or did you make it with reference to the construction of a series of such buildings? A. I made it with reference to the construction of one building. If I had a contract on a number, I could make a lower estimate.

Q. And if you had a contract for the construction of seventy-two of such buildings at the several stations of the complainant railway company in South Dakota, you think you could construct them for less than this estimate? A. Yes, sir.

Q. And how much less, do you think? A. I think about eight per cent. less.

Q. In making the estimate upon this building, what

basis did you use for estimating the wages of carpenters? A. $2.50 per day.

Q. The engine house mentioned in your estimate of buildings at the Sioux Falls station is the engine house represented by the photograph marked "Defendants' Exhibit 49." A. Yes, sir; it is.

Q. What condition did you find the station buildings of the complainant company in, with reference to repairs? A. Most of them were not in good repair.

Q. In what particulars were they out of repair? A. Mostly in painting, some otherwise.

Q. Were the roofs of any of these buildings painted? A. No, sir; not that I remember of.

Q. In making your estimate here of the painting to be done upon these buildings, in your estimate of the cost of construction, what class of work did you estimate in painting—two or three-coat work; A. I will have to refer to one of my estimates to tell you.

Q. Yes. (Witness referring to paper.) A. In the standard station, it is estimated two-coat work.

Q. From your inspection of the building, at the several stations of the railway company, what class of work had been done with reference to painting? A. Well, it is very hard to tell what the painting was in the first place. I could not say.

Q. You were familiar with the value of building material during the years 1880 to 1886, were you? A. I was, yes sir.

Q. I will ask you to state as near as you can the difference in the market value of building materials during the years I have mentioned, and at the present time, if there is any difference? A. I think materials were a little higher at that time than they are now.

Q. About how much higher? A. About eight per cent. higher.

Q. What class of material do you refer to particularly? A. Lumber.

Q. Was labor any higher at that time than now? A. Yes, sir.

Q. About how much? A. About 25 cents per day for carpenters higher than it is now.

Q. That is, about two per cent., then? A. We had to pay $2.75 for carpenters that we pay $2.50 for now.

Q. I will ask you if in estimating the cost of constructing the engine house and turn tables, water station, steam heating apparatus at the Mitchell station, you were informed as to the market value of the materials entering into the construction of those items? A. The materials that I did not know the price of, I got figures on it from parties who were dealing in that kind of material.

Q. Now, in the engine house at Mitchell, what kind of a boiler did you find there, used for steam heating purposes? A. There were two boilers—locomotive boilers.

Q. What were they—new or old boilers? A. Old boilers.

Q. That is, had they been devoted to some other use before they were placed in there? A. Yes, sir; they had been on traction engines.

Q. And in the heating arrangement of their round house at Mitchell, was the heat forced through the medium of radiators or simply coils of pipe? A. Simply coils of pipe.

Q. And did you include all such items as the pipes and heating arrangements, cinder pits and drainage, in making your estimate of the cost of the round house? A. Yes, sir.

Q. And of the turn-tables? A. Yes, sir; I did.

Q. And in making your estimate of the water stations, did you include the cost of the pump? A. Yes, sir; I did.

Q. Did you include the cost of the tank and foundation for the tank? A. Yes, sir; I did.

Q. I notice that there is a difference between your estimate of what it would cost to erect a standard depot according to these plans and your estimated cost of the Woonsocket station. I will ask you to state if you find any station house that was built strictly in accordance with the plans which were furnished you of a standard depot? A. No, sir: I did not.

Q. They were similar in style? A. They were similar in style.

Q. In what respect did they differ? A. The foundation was the principal respect.

Q. Well, explain, now, the difference? A. They were all built on stone piers instead of having a continuous stone foundation as shown in the plans. And, another difference in the standard station as it is figured, all of the rooms are ceiled both above and below; and in a number of their stations, they are plastered, and that is cheaper than the ceiling.

Q. So that the difference between the estimated cost of the standard stations and your estimate of the station at Woonsocket is represented laregly by the difference that you have called our attention to? A. Yes, sir. I have detailed estimates of those differences.

Q. And what is the total amount of estimate of the difference—can you state it? A. I do not understand the question. In the Woonsocket station, do you mean?

Q. Yes, sir. A. We can tell by referring to my figures.

Direct Examination continued by Mr. Temple.

Q. Mr. Booth, do I understand you personally examined the buildings belonging to the complainant railway company at the stations named in the Exhibits "37" to "42," inclusive? A. Yes, sir. I have personally examined all buildings I have estimates from. I do not know as to the number of the exhibits there.

Q. And in these exhibits which you have produced here, contained in Exhibits "37" to "42," inclusive, you have enumerated all the buildings and structures belonging to the complainant railway company at the various stations named in these estimates? A. Yes, sir.

Q. Each one of these estimates—each one of your estimates as contained in these exhibits begin with the term "contract price." By that do you mean your estimate of the cost of replacing these stations and buildings? A. I mean what I would be willing to replace them for as a contractor—not the actual cost of them.

Q. Then your estimates as contained in these exhibits is more than the actual cost of replacing the buildings and stations at this time? A. Yes, sir; it is.

Q. Your experience as a builder and contractor enables you to know what it would cost to reproduce these buildings and structures at this time? A. Yes, sir.

Q. You stated that in your estimate you had used a better class of material than you found in the buildings and structures. Do you mean by that a higher priced class of material? A. In some cases the lumber was so poor—in some of the buildings, I figured on a grade that would make a good substantial building. Take it at Harrisburg—

Q. And the material you figured on would cost more

than the material you found in these buildings and structures? A. In some cases, but not in all.

Q. I am asking in reference to your statement, that in some cases you used a better class of material? A. Yes, sir; I did.

Q. In Exhibit "51," which is your estimate of the cost of a standard station, I observe you have added ten per cent. What is that for? A. That is added for the contractors' profit and what we call a margin on the work.

Cross-Examination by Mr. Kittredge.

Q. When did you make this inspection, Mr. Booth? A. Let's see; I don't know the exact date now. I would like to refer to that bill I made out. (Witness examining paper.) In the latter part of February and first part of March, 1898.

Q. How many days were you engaged in making this inspection? A. Nineteen days.

Q. Does that include the actual inspection of the buildings, or the making up of your estimates afterwards? A. Both.

Q. How many days did you actually spend in making the inspection? A. About half of that time.

Q. Well, how much—can't you tell from your bill there? A. No, sir; I cannot tell from that bill.

Q. At whose request did you make the inspection? A. The railroad commissioners.

Q. And did you make it for the purpose of testifying in this case? A. I do not know what purpose it was made for—I suppose so.

Q. Did anybody go with you? A. No, sir.

Q. You went alone, did you? A. Yes, sir.

Q. Where did you go first? A. From Sioux Falls to Harrisburg.

Q. How did you happen to go to Harrisburg? A. I had time the day I went there to spend in going there.

Q. How did you happen to pick out Harrisburg to make an inspection of that station? A. I picked out a list of stations from the list they gave me, and asked them if those stations would be satisfactory to them, and they were.

Q. Was any suggestion made to you about the condition of the Harrisburg station? A. I think there was some talk about it.

Q. Now, what was that talk—was it not talked to you that the Harrisburg station had been out of repair, out of order, and not occupied for years, or something to that effect? A. I think there was some talk that the Harrisburg station was out of order, but not that it was unoccupied.

Q. You selected that as one of the stations to make your estimate on, so you could testify in this case? A. Yes, sir.

Q. You went to Harrisburg, and how long were you there? A. About two hours, I think.

Q. Then what station did you next go to? A. I went to Egan.

Q. How long did you stay in Egan? A. I stayed in Egan something like four hours, I think.

Q. And you went up to Egan in the morning and came back in the afternoon? A. No, sir; I went west from Egan.

Q. Did you go up in the morning and then go west that same day? A. Yes, sir; I went up in the morning and went west about 4 o'clock in the afternoon.

Q. So that the actual time spent in the inspection of

the Egan property was not over three hours, was it? A. I think it was four hours. I know I had time to spare after I got through with the inspection.

Q. How much time did you have to spare after going over it and inspecting it? A. Half an hour.

Q. And you eat your dinner in the meantime, I suppose? A. Yes, sir.

Q. And you left Sioux Falls at what time? A. About 10 o'clock, I think.

Q. Don't you know that that train goes west before 4 o'clock? A. About 4 o'clock.

Q. Don't you know it goes out at 3 o'clock? A. No, sir; it was later than 3.

Q. Was it late? A. I am not positive whether it was or not.

Q. You got up to Egan about 12 o'clock, did you not—about that time? A. I think it was before 12, for I estimated some of the buildings.

Q. What station did you pass through in going from Sioux Falls to Egan? A. I think I passed through Baltic, Dell Rapids and one or two other small stations.

Q. How large a place is Egan? A. I am not a very good judge of the size of a place by looking at it.

Q Is it a large place or a small place? A. It is a small place.

Q. How large a place is Harrisburg? A. It is a small place.

Q. Very small? A. Very small.

Q. There is nothing there but three or four stores, or half a dozen, is there? A. They have quite a number of business places there.

Q. There are not over a dozen buildings in the place, are there? A. Not over two dozen.

Q. How did you happen to pass through Dell Rapids and not make an inspection of the property of the company at that station? A. Well, I took those stations where I would not have to lay over too long at the station.

Q. How did you happen to select Vilas, if you did not want to lay over too long? A. I think that Vilas was mentioned to me—to estimate the station at Vilas.

Q. When was that mentioned to you, as you understood, that you would inspect the Vilas station? A. I could not tell you.

Q. They wanted you to inspect the Vilas station, did they? A. Yes, sir.

Q. What kind of a place is Vilas? A. I should judge it was a place of about 1,000 inhabitants.

Q. Vilas? A. Yes; it is quite a little town. I am not much of a judge by looking over a town, but I noticed a number of business places there.

Q. It has not but three hundred people, has it? A. (Not answered.)

Q. How far is the Milwaukee station at Vilas from the village? A. It is about thirty rods—thirty or forty rods from the station.

Q. How long did you stop at Vilas. A. I stayed there about one day—just one day, I believe.

Q. And where did you go next? A. I went from there to Woonsocket.

Q. Do you remember what time you got into Woonsocket? A. I got into Woonsocket in the evening.

Q. When did you leave Woonsocket? A. I left Woon-

socket--I stayed in Woonsecket two nights and left the following day.

Q. Then where did you go? A. I went to Mitchell.

Q. How long did you stay in Mitchell? A. About one day.

Q. Then where did you go? A I was a little over one day in Mitchell--one day and a half in Mitchell. I went from there to Sioux Falls.

Q. Did you inspect the Wolsey station? A. No, sir.

Q. So you started from Sioux Falls and passed through the stations of Baltic and Dell Rapids and went to Egan? A. Yes, sir.

Q. And then you started west from Egan and went through Coleman, Wentworth and Howard, and took in the town of Vilas? A. Yes, sir.

Q. Are any of those towns I have named, after you left Egan, as small as Vilas? A. Yes, sir; a number of them.

Q. Which ones? A. I could tell by referring to a little record I have. In passing through these stations, I looked at the buildings as much as I could.

Q. Did you get off the cars? A. Sometimes--if I had time I did.

Q. You rode on a passenger train all the time you were on the Southern Minnesota, from Egan west? A. Yes, sir. I think I was on the passenger all the time.

Q. Did you make an inspection of the buildings while the train was stopping at the station? A. Not in making these estimates, but in making the general estimate I did.

Q. Is it not a fact the stations you examined were designated by the Board of Railway Commissioners? A. No, sir: not all of them.

Q. Some were, were they? A. Vilas was.

Q. Were any others? A. I do not remember.

Q. Was not Harrisburg suggested by one of them? A. Harrisburg was talked of. I could not tell whether they suggested it or not. Vilas was the only one they suggested to me definitely.

Q. Then you passed on to Woonsocket and came down to Mitchell: you did not have time to inspect the stations at Alexandria, Marion Junction, Bridgewater, Parker, Lennox or Canton: you never stopped for one of them, did you? A. I looked Canton over pretty well.

Q. Did you make any estimate of the Canton station buildings? A. I have some detailed estimates on the Canton building. I have the papers from which I can make them.

Q. How long did you stop in Canton? A. About one hour, I think.

Q. Who helped you make the measurements of these buildings? A. I made them myself in most all cases.

Q. In what manner did you make the measurements of these station buildings? A. I got the length and breadth of the building and the height, to see that all stations conformed to the standard station, and when they did not, I got the measurements so I could size up the stations.

Q. Have you examined any other stations of the Milwaukee Company in the State of South Dakota except those you have testified to in exhibits "37" to "42," inclusive. A. I have never taken any measurements of them. I have examined them in a general way.

Q. You just looked at them? A. Yes, sir.

Q. That is what you call your inspection? A. In a gen-

eral way, and I examined in a general way—I would count the rafters, which were two foot apart.

Q. How do you know how far apart the rafters were? A. I measured different ones, upon different buildings, and I can tell by my eye, pretty near, that they are two foot apart.

Q. You can ride along in the train and tell how many rafters there are in the building? A. If they stop there two minutes, after measuring a number of the depots accurately, I can. If I count twenty rafters in the building, I know that building is forty feet long.

Q. Can you tell how wide it is? A. Not always.

Q. Can you tell the thickness of the timbers? A. No, sir.

Q. Did you attempt to do that in the measurement of these buildings? A. I did in all I estimated.

Q. How? A. I measured the timbers in each building.

Q. How? A. With my rule.

Q. How did you get at them? A. I went all through the building. I can tell the size of a studding by measuring. I went under all the floors and up in the attic, and all through the buildings, and so I got the measurement accurately.

Q. You spoke something about the buildings being ceiled. You do not know whether the buildings you did not examine were ceiled or plastered, do you? A. I know about all the buildings I estimated.

Q. I am not asking you about that. How about the other buildings you did not examine—could you tell about them? A. I could tell by looking through the windows. I noticed

some were ceiled and some were not. I did not pay much attention to them.

Q. Did you examine the stock yards at each station you have specifically mentioned? A. Yes, sir.

Q. Did you examine the stock yards at any other station? A. Only by passing through.

Q. Do you call that an inspection of stock yards? A. No, sir; not a close inspection.

Q. Do you want to swear the station buildings and property known as station buildings were accurately sized up by you as you rode through that station? A. Not accurately, but in a general way. If I looked at one stock yard and estimated it, and I went through a station and saw another stock yard that was something like it, I could estimate it. That would be what I would call a rough estimate.

Q. It is quite rough, is it not? A. It is something you could tell pretty close.

Q. If you was going to take a contract for those buildings you would want to go through all of them, would you not? A. Yes, sir.

Q. What do you want it understood here; that you are going around and taking three or four stations and estimating a work like that, or don't you want the court to understand it that way? A. I don't want it understood that way.

Q. I understand all you want your testimony to go to is the stations you have itemized? A. Those I am positive are correct and am willing to build the buildings at the present time for that amount.

Q. You did not go back and estimate what it actually cost the company at the time they were constructed? A.

No, sir. Those estimates are what they could be built for to-day.

Q. Where did you figure the lumber was to be shipped from—the cost of the lumber that went into these buildings? A. I figured it was to be delivered at the station it was to be built.

Q. I thought you said you figured on the standard station, the price was to be governed by the Sioux Falls market? A. Yes, sir.

Q. Do you think that is fair when the stations are away up in the state from here? A. Yes, sir; I could deliver the lumber at any of the stations I figured on at a less price than I figured it here.

Q. At Sioux Falls? A. Yes, sir.

Q. From what point? A. You mean from what points I ship my lumber?

Q. Yes, sir. A. I used the lumber from the local dealer —I have prices from the local dealer.

Q. Here at Sioux Falls? A. Yes, sir; and at the stations I estimated the buildings at.

Q. I thought you said the Sioux Falls market governed that? A. That was the standard stations.

Q. Do you claim you can get lumber as cheap in Chamberlain as in Sioux Falls? A. I can get the lumber cheaper in any of the stations than I have estimated it here.

Q. Can you get lumber cheaper in Chamberlain than you can at Sioux Falls? A. I cannot say.

Q. You were not over in Chamberlain, then? A. No, sir.

Q. Nor anywhere out on that line? A. No, sir.

Q. You were not over any part of the eleven hundred

miles of the Milwaukee road in the State of South Dakota, except the part you have mentioned? A. That is all.

Q. Have you ever been on the line up above Woonsocket, towards Aberdeen? A. No, sir.

Q. Have you ever been on the line east of Aberdeen, on the Hastings and Dakota Division, east of Aberdeen? A. No, sir; I have not.

Q. Have you ever been on the line from Mitchell to Sioux City by the way of Yankton and Scotland? A. Yes, sir.

Q. Have you ever been on the line from Marion Junction to Running Water? A. No, sir.

Q. When were you on the line from Mitchell to Sioux City by way of Yankton? A. I went to Sioux City a number of times by way of Yankton; yes, sir.

Q. Did you look at the buildings as you were going by? A. Only in a general way.

Q. Did you estimate the value of the buildings or what it would cost to build those buildings along in the 80's, when you were going through? A. No, sir; I did not.

Q. Then your estimate in those exhibits are simply what it would cost to replace this property as you found them? A. They are what I am willing to contract to put up those buildings for in good order and all painted.

Q. At the present time? A. Yes, sir.

Q. You have no personal present recollection of the exact price of anything back there in 1880 to 1883, especially 1883 and 1884, have you? A. Yes, sir. The price of material and the price of labor at that time.

Q. And you say it was higher? A. It was a little higher then than now.

Q. Every article was higher? Is there any article—anything that enters into the construction of those buildings that is higher to-day than it was in the years 1880 to 1887? A. No, sir; I do not think there is.

Q. Everything is higher? A. Slightly higher; yes, sir.

W. T. LA FOLLETTE, being called as a witness on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, nothing but the truth, and estified as follows:

Direct Examination by Mr. Null.

Q. You are one of the defendant Railway Commissioners? A. Yes, sir.

Q. I will ask you if you recollect during the taking of testimony at the office of complainant, in the City of Chicago, that the railway company supplied you with blue prints of the standard depots, such as they call standard depots in South Dakota? A. Yes, sir.

Q. I show you the blue prints and ask if those are the ones given to the Commission at that time? A. Yes, sir.

Q. And you handed the plans to Mr. Booth, who just left the stand? A. Yes, sir; I did.

Q. And the plans which you handed Mr. Booth are the identical plans furnished the Commission by the complainant? A. Yes, sir.

Thereupon the taking of testimony in this case was adjourned to 2 o'clock p. m. of said day.

April 27, 1898, 2 o'clock p. m.

The taking of testimony continued as per adjournment.

Mr. Null: I want to offer in evidence so much of the 21st annual report of the Chicago, Milwaukee and St. Paul Railway Company for the year 1884, which reads as follows on page 10:

Extraordinary Expenditures.

There have been purchased and added to the equipment of the company, as follows:

Locomotives	12	
Passenger coaches	24	
Parlor cars	2	
Sleeping cars	7	
Dining cars	3	
Derrick car	1	
Fruit refrigerator cars	5	
Box freight cars	250 at a cost of	$447,527 00
Additional equipment has been built in the company's shop, costing		92,411 78
Making the cost of additions to rolling stock		$539,938 78

Mr. Kittredge: Complainant objects to the receipt of such offer in evidence for the reason it is incompetent and immaterial.

Mr. Null: I offer so much of said report on page 26 under the head of value of fuel and supplies on hand December 31st, 1884, which reads as follows:

Ties, 517,262	$176,368 27
Steel and iron rails, 5,507 tons	116,833 25

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: I offer so much of the 22d annual report of the Chicago, Milwaukee and St. Paul Railway Company for the year 1885, page 10, which reads as follows:

Extraordinary Expenditures.

There have been purchased and added to the equipment of the company as follows:

Locomotives.....	20		
Passenger coaches.....	20		
Box cars.....	100		
Refrigerator cars.....	50 at a cost of.....		$338,759 77
Additional expenditure has been made in the company's shop on equipment, amounting to			73,106 07
Making the cost of addition to rolling stock.....			$411,865 84

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: I offer so much of said report as appears on page 27 and reads as follows:

Value of Fuel and Supplies on Hand December 31st, 1885.

Ties, 450,393.....	$158,463 03
Steel and iron rails, 6,201 tons.....	119,170 47

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: The reports from which these readings are made are the reports of the directors to the stockholders of the Chicago, Milwaukee and St. Paul Railway Company.

Mr. Null: We offer in evidence so much of the report of the twenty-third annual report, 1886, as is found on page 12, which reads as follows:

Extraordinary Expenditures.

There have been purchased and added to the equipment of the company the following, viz:

Locomotives.....	20		
Passenger coaches.....	15		
Sleeping cars.....	5		
Dining cars.....	1		
Baggage cars.....	4		
Business cars.....	1		
Box cars.....1500			
Flat cars.....	730	at a cost of.....	$1,152,032 73
Additional expenditure has been made in the company's shop on equipment amounting to			72,114 23
Making the cost of additions to rolling stock..			$1,224,146 96

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the said report as reads as follows, page 13:

The following is a comparative statement of coal consumed by locomotives for the past three years:

1884, tons of coal used, 809,691. Aggregate cost, $1,898,735.70. Cost per ton, $2.34½. Miles run per ton, 25.56.

For the year 1885, tons of coal used, 837,027. Aggregate cost, $1,850,545.70. Cost per ton, $2.23¾. Miles run per ton, 26.

For the year 1886, tons of coal used, 875,091. Aggregate cost, $1,848,903.40. Cost per ton, $2.11¼. Miles run per ton, 26.80.

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of said report as appears on page 31 which reads as follows:

Value of Fuel and Supplies on Hand December 31st, 1886:

Ties, 789,323 ..... $358,628 31

Steel and iron rails, 11,581 tons 327,688 53

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 24th annual report for the year 1887 as appears on page 30, as follows:

Equipment and Improvement Expenditures.

For locomotives and cars purchased $598,852 12

Amount expended in company's shop 231,939 37

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of page 50 which reads as follows:

Value of Fuel and Supplies on Hand December 31st, 1887.

Ties, 1,621,267 ..... $694,732 85

Steel and iron rails, 32,322 tons 872,307 12

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of the report for the year ending December 31, 1888, as appears upon page 21 under the head of detail of equipment and improvement expenditures for the year 1888, which reads as follows:

Round house, etc., Aberdeen ..... $ 6,484 21

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of said report as appears on page 22, which reads as follows:

Material and Fuel on Hand.

Ties	550,945	$217,204 50
New steel rails	972 tons	32,732 55
Old steel rails	7,621 tons	185,626 48
Old iron rails	12,299 tons	261,542 41

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of the 25th annual report for the year ending June 30, 1889—so much of the report as appears upon page 11 which reads as follows:

During the year, forty locomotives have been purchased at a cost of $375,700; ten have been scrapped, and five (too light for service) have been sold. Twenty passenger coaches have been purchased at a cost of $95,612 07, and one rotary snow plow, at a cost of $15,000.

Twenty-four caboose cars, costing $18,514.45; one mail car, costing $3,102.65; 500 lumber and furniture cars, costing $217,932.97, and 100 refrigerator cars, costing $75,385.92, have been built at the West Milwaukee shops.

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of page 24 of said report under the head of detail of equipment and improvement expenditures:

Depot, Aberdeen, ... $ 5,833 19

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of page 25 of said report under the head of material and fuel on hand, which reads as follows:

Ties	719,655	$281,173 65
New steel rails	3,120 tons	97,676 00
Old steel rails	4,816 tons	113,360 62
Old iron rails	5,946 tons	127,094 09

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 26th annual report for the year 1890, page 11, which reads as follows:

During the year twelve locomotives have been purchased at a cost of $102,763.05, and two have been built at the West Milwaukee shop at a cost of $14,677.36. 215 furniture cars, costing $104,000.43; 400 lumber cars, costing $178,174.98; three baggage, mail and express cars, costing $9,548.79; and one flat car, costing $291.22, have been built at the West Milwaukee shop.

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of the 27th annual report for the year ending June 30, 1891, as reads as follows (page 10):

Double Track.

Construction of the following sections of second main track has been substantially completed, and they are in use:

On the Chicago and Milwaukee Division, Lake to Minerva	5.70	miles
On the Chicago and Council Bluffs Division in Illinois:		
Savanna to Mount Carroll	10.21	"
Cragin to Mont Clare	4.27	"
Genoa to Davis Junction	20.61	"
Total	40.80	"

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of the said report as appears on page 28 under the head of detail equipment and improvement expenditures:

Second track, Savanna to Mount Carroll	$ 77,729 90
Second track, Lake to Minerva	62,687 07
Second track, Genoa to Davis Junction	187,440 56

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 28th annual report for the year ending June 30, 1892, as appears upon page 9, which reads as follows:

Double Track.

Construction of the following sections of second main track have been begun, and will be completed this summer:

Chicago and Milwaukee Division:	
Forest Glen to Wadsworth	32.7 miles
Lake to Western Union Junction	16.1 "
Chicago and Council Bluffs Division:	
Mont Clare to Franklin Park	3.5 "
Kittredge to Mt. Carroll	11.2 "
Northern Division:	
Grand Avenue to North Wilwaukee	5.0 "
Total	68.5 "

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of page 20 under the head detail of equipment and improvement expenditures which reads as follows:

Austin, Minn., turn-table	$1,353 22
Milbank, So. Dak., turn-table	1,138 53
Mystic, Ia., turn-table	932 91
Second track:	
Milwaukee to Lake	2,438 17
Genoa to Davis Junction	10,889 35
Savanna to Mt. Carroll	4,175 79
Lake to Western Union Junction	29,269 47
Forest Glen to Wadsworth	15,459 24
Mont Clare to Franklin Park	6,360 69
Kittredge to Mt. Carroll	24,620 05
Grand Avenue to North Milwaukee	8,003 44
Total	$101,216 27

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 29th annual report for the year ending June 30th, 1893, as appears on page 9, and reads as follows:

Double Track.

The following sections of second main track have been completed during the year:

Chicago & Milwaukee Division:	
Forest Glen to Lake	67.43 miles
Chicago & Council Bluffs Division:	
Mont Clare to Bensenville	8.00 miles
Kittredge to Mt. Carroll	11.40 miles
Northern Division:	
Milwaukee to North Milwaukee	5.06 miles
Total	91.89 miles

Second main track is now completed between Chicago and Milwaukee. The grading for second main track on Chicago and Council Bluffs Division in Illinois, Bensenville to Genoa, 41.72 miles, is now under construction under contract made last fall. The track will not be laid this season.

Rolling Stock.

23 locomotives	$179,686 67	
2 sleeping cars	21,041 31	
38 coaches	201,533 01	
3 parlor cars	30,641 20	
		$442,902 19

The following rolling stock has been built at the company's shop:

1,500 flat cars	$518,957 29	
350 stable stock cars	201,370 48	
13 baggage, postal mail and express cars	27,338 04	
24 caboose cars	13,400 62	
5 narrow gauge stock cars	1,036 93	
Total		$762,103 36

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: On page 22, detail of equipment, and improvement expenditures:

Second track:

Chicago & Milwaukee Division	$616,214 74
Chicago & Council Bluffs Division	255,614 12
Milwaukee to North Milwaukee	46,808 18
Total	$918,637 04

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 30th annual report for the year ending June 30th, 1894, as appears on page 9, as follows:

On account of the opening of the Sisseton Reservation, the branch line from Milbank on the Hastings & Dakota Division has been extended from its former terminus into the reservation to Sisseton, a distance of 4.24 miles. The cost of extension to date is shown on page 27 of this report.

The grading for second main track on the Chicago and Council Bluffs Division in Illinois, from Bensenville to Genoa, 41.72 miles, under construction at date of last report, has been completed, and 5.54 miles of track have been laid thereon

Rolling Stock.

The following rolling stock has been purchased:

2 compartment sleeping cars	$39,171 93	
2 buffet cars	21,446 74	
1 standard mail car	3,333 82	
		$63,952 49

The following rolling stock has been built at the company's shop:

4 locomotives	$30,000 00	
100 refrigerator cars	84,428 00	
10 box carriage cars	6,776 38	
		$121,204 38

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: On page 27 of said report, under the head of detail of equipment and improvement expenditures, which reads as follows:

Extension of branch line to Sisseton, South Dakota, about 4.24 miles—cost to date $20,154 94
New coal and oil houses—Iowa & Dakota Division 1,211 58

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: On page 28, under this same head:

New iron turn-table, Mitchell, S. D..	$ 688 17	
Second main track:		
Chicago & Milwaukee Division ..	17,171 93	
Chicago & Council Bluffs Division	145,787 55	
Northern Division	822 77	
Total		$163,872 25

And on page 30:

Ties, 1,355,703	$442,094 18
New steel rails, 1,491 tons	45,712 93
Old steel rails, 6,236 tons	95,495 04
Old iron rails, 18,821 tons	271,232 63

Mr. Kittredge: Objected to as incompetent an immaterial.

Mr. Null: We offer so much of the 31st annual report for the year ending June 30th, 1895, on page 9, which reads as follows:

An extension of the Wisconsin Valley Division, from Minocqua, its former terminus, to Star Lake, a distance of 18.80 miles, has been completed at a cost of $183,623.73.

On page 25, under the head of detail of expenditures for improvements and additions to property:

Station buildings:	
Sioux Falls, S. D., freight	$ 5,697 50
Sioux Falls, S. D., passenger	6,414 15

On page 26, under the same head, "unused material," heretofore charged to construction, second main track, $9,306.10.

On page 27, under the head of material and fuel on hand:

Ties	1,038,094		$301,891 64
New steel rails	947 tons		23,983 66
Old steel rails	8,957 tons		105,404 02
Old iron rails	18,598 tons		268,996 72

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer so much of the 32d annual report for the year ending June 30, 1896, as appears on page 9, as follows:

There was expended out of the fund the sum of $364,909 81 for actual replacements, as follows:

11 locomotives	$101,824 36
1 standard postal car	3,291 07
575 box cars	257,863 96
5 flat and coal cars	1,930 42

On page 31, under the head of "detail of expenditures for additions and improvements to property," the following:

Station buildings:

Summit, S. D., freight and passenger	$ 975 78

On pages 32, under the head of "material and fuel on hand":

Ties	927,191		$295,658 85
New steel rails	1,390 tons		31,842 21
Old steel rails	11,248 tons		152,008 98
Old iron rails	11,550 tons		152,190 86

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence so much of the said 33d annual report for the year ending June 30, 1897, on page 9, which reads as follows:

Miles of second main track owned solely by the company have been increased 22.65 miles during the year, as follows:

Of the section between Bensenville and Genoa on the Chicago and Council Bluffs Division in Illinois—a distance of 41.72 miles—begun in 1892, 26.90 miles have been completed, of which 4.17 miles were completed prior to July 1, 1896, an increase during the year of 22.73 miles.

Of the remainder of this section, 11.82 miles have been graded and the work of laying the track is in progress.

The work of grading is in progress for the section of second main track between Davis Junction and Kittredge on the Chicago and Council Bluffs Division in Illinois, a distance of 36.49 miles, but no portion has been completed.

The second main track on the Evanston Division was increased .17 miles, total 22.90 miles.

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: We offer in evidence on page 11, under the head of "summary of capital expenditures," the following:

For second track	$185,698 16
Side tracks, 16,200 feet	12,747 82
For Nekoosa, Wis., loop and "Y," 5,048 ft	3,669 68

On page 33, under the head "detail of expenditures for addition and improvements to property":

Second track, Chicago and Council Bluffs Div., Ill.:	
Between Bensenville and Genoa	$176,595 69
Between Davis Junction and Kittredge	9,102 47
Station buildings:	
Sanborn, Iowa, water tank	500 00

On page 34, under the head of "material and fuel on hand":

Coal.....	54,138 tons.....	$100,050 37
Ties.....	843,298.....	233,677 15
New steel rails.....	743 tons.....	18,119 31
Old steel rails.....	16,065 tons.....	173,947 01
Old iron rails.....	18,813 tons.....	195,083 20
Rail fastenings.....	12,564,053 pounds.....	119,546 53

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Temple: All the extracts from reports read by Mr. Null since the noon hour and offered in evidence are from the annual reports of the directors of the Chicago, Milwaukee and St. Paul Railroad Company to the stockholders.

Mr. Temple: The defendants offer in evidence the whole of page 32 of the 33d annual report of the Chicago, Milwaukee and St. Paul Railway Company for the fiscal year ending June 30, 1897. The said statement containing a statement of commodities transported upon the entire system during the years ending June 30, 1895, 1896 and 1897.

(Defendants' Exhibit 52 marked for identification, being page 32 of the 33d annual report of the complainant company above referred to.)

Mr. Kittredge: Object to its receipt as being incompetent and immaterial.

DEFENDANTS' EXHIBIT 52.

Statement of Commodities Transported During the Years Ending June 30th, 1895, 1896 and 1897.

Commodities.	1895.		1896.		1897.	
	Tons.	Per Cent.	Tons.	Per Cent.	Tons.	Per Cent.
Flour	413,677	3.949	472,322	3.868	435,368	3.768
Mill Feed	137,309	1.311	152,252	1.247	130,895	1.133
Wheat	735,743	7.023	1,091,874	8.942	1,139,407	9.681
Rye	39,865	.381	41,548	.340	61,282	.530
Barley	504,889	4.819	671,719	5.501	595,605	5.155
Oats	351,509	3.355	586,976	4.807	629,198	5.446
Corn	174,046	1.661	238,368	1.952	337,590	2.922
Flax Seed	73,943	.706	181,646	1.488	162,386	1.405
Hay	125,011	1,193	153,968	1.261	101,423	.878
Dairy Products	47,744	.456	49,374	.404	54,622	.473
Other Agricultural Products	191,010	1.823	206,379	1.691	224,922	1.947
Provisions	191,770	1.831	213,121	1.746	193,752	1.677
Salt	58,369	.557	66,350	.543	57,492	.498
Lime, Cement and Plaster	153,153	1.462	151,707	1.242	123,901	1.072
Brick and Stone	515,998	4.926	599,541	4.911	529,134	4.579
Iron and Steel	273,912	2.615	372,576	3.052	271,428	2.349
Manufactures	518,130	4.947	597,539	4.893	571,260	4.944
Coal	1,585,719	15.137	1,630,220	13.352	1,428,108	12.360
Live Stock	575,967	5.498	635,688	5.207	635,699	5.502
Lumber	1,205,396	11.506	1,157,487	9.480	1,067,495	8.720
Other Forest Products	778,327	7.430	911,861	7.468	948,686	8.211
Merchandise	922,532	8.806	926,509	7.588	845,122	7.314
Ice	217,490	2.075	210,306	1.722	213,466	1.848
Miscellaneous	684,442	6,533	890,664	7,295	855,922	7.408
Total	10,475,942	100.000	12,210,055	100.000	11,554,153	100.000

Thereupon the taking of testimony in said cause was continued to April 28, 1898, at 10 o'clock a. m.

April 28, 1898, 10 a. m.

By stipulation of the parties in the above entitled action, by their respective attorneys, the taking of testimony in said cause was continued to April 29, 1898, at 10 o'clock a. m.

April 29, 1898, 9 a. m.

K. NELSON, being called as a witness on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, testified as follows:

Direct Examination by Mr. Null.

Q. Whereabouts do you reside? A. In Milbank, South Dakota.

Q. What is your occupation? A. I am roadmaster of the Chicago, Milwaukee and St. Paul Railroad Company.

Q. What portion of the lines of the Chicago, Milwaukee and St. Paul Railroad Company are you roadmaster of? A. I have charge of the line from Milbank to Aberdeen and from Andover to Harlem.

Q. You have charge of the Sisseton line? A. No, sir.

Q. Or further east than Milbank? A. No, sir.

Q. How many miles of road do you have charge of? A. I think it is 152 miles.

Q. How long have you been in the employ of the Chicago, Milwaukee and St. Paul Railroad Company? A. I commenced to work for them in the spring of 1880.

Q. Whereabouts? A. I commenced to work on the line at Flandreau.

Q. In what capacity? A. I was a laborer.

Q. On the section? A. Yes, sir—the same thing. It was an extra gang. I worked in an extra gang.

Q. How long have you occupied your present position? A. Since the 1st of August, 1887.

Q. What are the duties of the roadmaster? A. Why,

they have got charge of the maintenance of track, fences, etc.

Q. How are they classified under you? A. Well, they are divided into sections.

Q. How many sections are there in the line you have charge of? A. Nineteen.

Q. And about what is the average number of miles to the section? A. On the main line they are from seven to eight miles.

Q. And how long are the branch lines? A. They are from nine to ten miles.

Q. Who has charge of the sections? A. Well, the foreman; the section foreman has charge of the sections.

Q. How many men does he have with him, generally speaking? A. Well, in the summer we have from three to four; I will say from two to four.

Q. How many in the winter time? A. Well, it depends on the weather, of course. If we have snow, if we have much snow, we have a great many; that is, in the winter. And if we do not have any snow, we have one or two, and on some sections no man at all except the foreman.

Q. Then, aside from the question of snow and snow blockades, there are not many men employed during the winter, except as section foremen? A. Not unless we have special work. This winter we employed a good many men on account of the track heaving. We had to do a great dealing of skimming, and that required extra help.

Q. About what time in the spring did you employ the help? That is, aside from the section foreman, for the summer months? A. Just as soon as the frost is out sufficient to put in ties and go to work.

Q. About what time is that, ordinarily? A. Well, it was, I think, we put them on about the 10th of this month. I will not be sure about that—I do not remember.

Q. About the 10th of April? A. Yes, sir.

Mr. Kittredge: This was this year?

The Witness: Yes, sir; we had permission to put them on as soon as we could work them.

Q. It was a little earlier this year than ordinarily? A. Yes, sir.

Q. You usually commence about the middle of April or 1st of May—about that time? A. Not later than the middle of April, anyway.

Q. What time are they taken off of their work? A. About the time it freezes up.

Q. Give us the date, if you can, as near as you can? A. I could not say; the ground freezes earlier sometimes than at other times. About the 1st of November, I guess, would be a fair estimate.

Q. Ordinarily, then, the extra help for the summer months are employed for about six months? A. It would be longer than that would it not?

Q. Six and one-half, I guess, about six and one-half? A. Yes sir.

Q. Who employs the section foremen? A. I do.

Q. And who employs the help for the section foremen? A. The foreman does.

Q. What wages are paid the section foremen? A. $45 a month.

Q. The year round? A. Yes, sir.

Q. What wages are paid the section men? A. $1.10 a day.

Q. Who is your superior officer in your particular department? A. Mr. F. T. Fox is our superintendent.

Q. Where is he located? A. At Minneapolis.

Q. Do you know what particular lines of the company's road he has charge of? A. He has charge of the H. & D. Division and branches.

Q. What office does he hold? A. Superintendent.

Q. Division superintendent? A. Yes, sir.

Q. And you make all your reports to him, do you? A. Yes, sir.

Q. Do you report to any other officer of the company? A. No, sir.

Q. Who receives the supplies for the repairs upon the road under your charge? A. Well, I receive them.

Q. From whom do you receive them? A. Well, we get the most of our supplies from our general storekeepter.

Q. Who is the general storekeeper? A. Mr. Higby.

Q. And where is his office? A. In West Milwaukee, I believe.

Q. What supplies do you receive from him? A. Why, tools and spikes and bolts, and so on.

Q. Do you receive any supplies from any other source? A. Why, I don't know where we receive our ties from; they buy them, I think, in Wisconsin or Michigan.

Q. From what officer of the company do you receive the ties, or from what department? A. Well, from the track department.

Q. And what officer has charge of that department? A. I think Mr. J. B. Moll has charge of the department.

Q. What office does he hold with the company? A. He is general roadmaster.

Q. General roadmaster of the entire system? A. Yes, sir.

Q. And where is his office? A. In Chicago.

Q. The ties that you receive come from him? A. Yes, sir; I think so.

Q. And did you make any report to him of the use you made of the ties? A. No, sir; I report to the superintendent.

Q. The division superintendent? A. Yes, sir.

Q. From whom do you receive rails? A. Well, I think Mr. Moll furnishes them too.

Q. And did you report to him the use you have made of the rails? A. No, sir.

Q. That is also reported to the division superintendent? A. Yes ,sir.

Q. How often do you make report to the division superintendent of the use of material? A. Every month.

Q. At the end of every month. A. Yes, sir.

Q. You are furnished with a regular blank upon which to make that report? A. Well, some of it we are.

Q. Is that every calendar month? A. Yes, sir.

Q. And to whom do you report the quantity of supplies on hand? A. That is reported to the division superintendent too.

Q. How often do you make that report? A. Well, every month.

Q. You have a regular statement which you make at the end of the month? A. Yes, sir. The section men are

furnished with a blank report to report all material they receive, use, or have on hand at the end of each month.

Q. And that section report comes to you? A. Yes, sir.

Q. And you forward them all to the superintendent of the division? A. Yes, sir.

Q. Do you keep a record of this? A. Yes, sir; I do.

Q. Do you mean you have a complete record of all material that has gone on to your division, and the use that was made of it? A. Yes, sir.

Q. And of the material on hand? A. Yes, sir.

Q. You have such a record as that from the time you became roadmaster to the present time, have you? A. No; I do not think I have the record now. I believe it has been lost or destroyed.

Q. How far back do you think you have such a record? A. I do not remember now; three or four years, I think.

Q. Have you any of that record with you? A. No, sir.

Q. You said the sections on the main line were about seven or eight miles? A. No—seven or eight miles; yes, sir.

Q. And during the summer time the section foremen have from two to four men? A. Yes, sir.

Q. That is, in all, from three to five men on a section? A. That is the regular section force; if we have extra work to do, we have extra men.

Q. What work is done by these section men? A. Well, they put in ties and keep the tracks and surface in line, repair the fences, and so on.

Q. They report to you at the end of the month just the particular work they have been engaged in? A. Yes, sir.

Q. You know at the end of the month just what each section and section foreman and his men have been engaged in? A. Yes, sir; but I do not keep any record of them.

Q. Aside ftom the report? A. No, sir.

Q. Did you sent that report to the division superintendent? A. Yes, sir.

Q. What is the first work that the section men usually begin in the spring? A. Putting in ties, as a rule.

Q. And after that is completed, what is their next duty? A. Why, I surface up the track—surface and line the track and cut the weeds.

Q. And after that, what are they engaged in? A. Well, in surfacing and lining; that we have to do more or less right along.

Q. Do they make a fire break and burn off the right of way? A. Yes, sir.

Q. And in the fall, what particular work do they have to do? A. That is the most of our work, in the fall, to make fire breaks and burn off the right of way.

Q. And do they look after the snow fences too? A. Well, some of them do. We generally put them up with extra gangs.

Q. That is, when you have snow fences that were taken down in the summer and set up again? A. Yes, sir.

Q. You have a great many snow fences that are permanent? A. Well, not so many on my division.

Q. You have some—the posts are set in the ground and the boards are nailed on? A. Yes, sir.

Q. And the section men go along and repair that fence and keep it in order? A. Yes, sir.

Q. The snow fence that is in sections that you take down and put up again, where is that kept during the summer season? A. It is piled on the right of way.

Q. Along where it is likely to be needed? A. Yes, sir.

Q. It is not taken to any headquarters, or anything of that kind? A. No, sir.

Q. Who takes them down in the spring? A. The section men do.

Q. And the section men and such extra help as may be necessary put it up again in the fall, do they? A. Yes, sir.

Q. Do you know about how much time it takes the section men on the section to take down this snow fence in the spring? A. Why, on some sections it takes four men and the foreman from six to ten days to take them down.

We only take down the fence standing on the plowed land. When the land is not cultivated we leave it standing.

Q. That is a general rule, is it? A. Yes, sir; when the farmers give us permission to leave it up.

Q. So that you do not take down and put up your snow fence, except when it interferes with some farmer cultivating the land, or something of that kind? A. Yes, sir.

Q. How much of that time are the section men engaged in surfacing? A I think about one-quarter of the time during the summer season.

Q. About one-quarter of the time is put in? A. About one-third.

Q. About one-third? A. Yes, sir.

Q. Explain to us just what you mean by surfacing? A. When the tracks get rough, you know—I just go down—we have to raise them up—bring them up to the surface.

Q. In other words, you mean by surface, the labor of

working sand under the tres and keeping the track level? A. Yes, sir.

Q. And in your judgment it requires about one-third of the time of the force to keep the track smooth and level? A. Yes, sir.

Q. How much of that time is occupied in burning off the weeds and clearing the right of way? A. Well, take cutting the weeds during the summer, and burning off the right of way, it take about one-third of their time, I think.

Q. About what time in the summer do they begin that work? A. Just as soon as the grass is dry enough to burn it. Of course we do our plowing before harvest.

Q. Do they engage in this work of cutting weeds and clearing the right of way—they begin that as early as the 1st of July? A. Yes, sir; earlier than that.

Q. The 1st of June? A. Sometimes in May; it depends on the season.

Q. And after that work begins, your judgment is that it takes about one-third of the time to keep the right of way clear of weeds and rubbish? A. Yes, sir.

Q. What work do the section men do around the station and in the yard? A. They keep the station grounds clean, the grass mowed down and the weeds cut and all the stuff raked up and hauled out.

Q. About how much of their time is devoted to that work? A. I included that kind of work in cutting the weeds.

Q. Ordinarily, a section includes about one station, do they not? A. Well, some sections have two stations.

Q. A majority, only, have one, do they not? A. That is all.

Q. Do the section men do such work as building side-

tracks and track into gravel pits, that is, items of minor construction? A. We generally do that with extra help—extra men.

Q. They do the work of taking up side-tracks laid to gravel pits and other side-tracks which the company has no further use for? A. We have not taken up any on my division. I do not know how the rest of them do.

Q. They do the work of relaying rails, do they, when rails are put in, do they? A. No, sir.

Q. They do not do that? A. We do that with extra help.

Q. How many men constitute a gang for laying rails in the ordinary repair of the road? A. It depends on how much we have to lay. If only a small amount, I put on a gang of fifteen or twenty men, and if a large amount of rails, we have from forty to fifty men.

Q. And that is done under your supervision? A. Yes, sir.

Q. And your work in that respect is reported to the division superintendent? A. Yes, sir.

Q. And you keep a record of such work, do you? A. I think I have; I would not be quite sure, but I think I have.

Q. Taking a gang of fifteen men and relaying rails, how many rails would they lay in a day, taking up the old ones and putting down the new ties? That is, in other words, what would be a day's work for such a gang? A. Well, they might lay half a mile. That is, take the old rail out. They could not disconnect the old rail and pile it up, but just throw it out and put in a new rail.

Q. And who would pick up the old rails and bolts? A. They would do that after they got the new rails laid.

Q. Does the extra gang do that work? A. Yes, sir.

Q. You have had some of them work there on that division on which you have taken up the old rails and relaid it with new rails? A. Yes, sir.

Q. Where was the principal amount of that work done? A. I want to correct one item there. Fifteen men could not lay a half a mile a day.

Q. Just state your best judgment of that; that is all we can expect. A. I think one-third of a mile would be about right.

Q. Now, in your estimate of the fifteen men, do you include the same crew who would deliver the material? A. No, sir.

Q. That is just the men who would work on the track? A. Yes, sir.

Q. When was the principal amount of this relaying done that you speak of? A. Well, we commenced to lay steel, laid from Millbank west in 1888. It was all iron rails up to that time. We laid some in 1887.

Q. And you began then taking up all the iron and putting down all steel? A. Yes, sir.

Q. Do you know the character of that steel as to whether it was new rails or what is called relayers? A. Some of it is known as relayers.

Q. What kind of steel was it? A. Sixty pounds to the yard.

Q. Can you tell us at this time, if you remember, the date of those rails as indicated by the brand on them? A. No; I could not on the old steel.

Q. Do you remember the brand on the new steel? A.

The new steel was made in 1887, the same years as we laid it.

Q. And how long did the work continue—until you got clear to Aberdeen? A. I think we finished in the spring of 1893.

Q. That labor was performed by such a gang as you have described—about fifteen men? A. We laid about forty miles of steel in 1892, and we had to have two gangs to handle and lay them—one gang for laying and one gang for unloading, etc. Thirty men in one gang and forty in the other, I think.

Q. Ordinarily you have some extra rails along the right of way for repairs? A. Yes, sir.

Q. About how many? A. One for each mile.

Q. That is set up on a post? A. Yes, sir; ready for use.

Q. In case a rail should become broken or taken out it would have to be replaced with a new rail. Who would do that work? A. The section men.

Q. About how much of their time is employed in replacing rails of that kind? A. It would be a very small portion.

Q. There is not much of that work to do? A. No, sir.

Q. You say the tie replacement was all done by the section men? A. Yes, sir; except when we lay steel, we employ extra men to change the joint ties, and they also put the ties under the steel.

Q. The joint ties—what do you mean by that? A. The ties under the joints.

Q. The rail joint? A. The rail joint. They will not come in the same place as the old ones were. We have to change them.

Q. Do you break the joints between the ties or on the ties? A. It depends on the joints we use.

Q. That is the angle bar? A. Yes, sir.

Q. So you lay the ties so the joint comes between them in some places? A. It depends on the joint. Some we have the joint on the ties, and some are suspended with one tie on each side of the joint, but in the ordinary repair of the line the section men do the work.

Q. Of replacing the ties? A. Yes, sir; in ordinary work.

Q. And take section foreman with three men how many ties would constitute a day's work in taking out the old ties and putting in the new ones and ballasting up the track again? A. Well, that depends very largely on the ground he has got to work in. Some places we can put in more ties than others.

Q. Well, about what is your best judgment from your experience—what in your judgment would be the day's work? A. About fifteen ties to the man is a good day's work.

Q. So, if there was a section foreman and three men with him, sixty ties would be a good big day's work? A. Yes, sir.

Q. Do you think they average that much? A. Not on all sections.

Q. You think that would be a big day's work? A. Yes, sir.

Q. You think the average would be less than that? A. Yes, sir.

Q. You think the average would be less than fifty? A. Yes, sir; it would.

Q. Can you tell the number of cattle guards in the track on your division? A. We have not got but one west of

Millbank. Our line was not fenced only in places where the farmers asked us to fence. When they fenced their land, we fenced the right of way. But it is not fenced all the way through.

Q. Do I understand you to say you only had one cattle-guard west of Millbank? A. I think that is all on the track now.

Q. Between Millbank and Aberdeen? A. Yes, sir.

Q. And when was that put in? A. I do not remember now. Two or three years ago, I think.

Q. Do the section men put in new mile posts when the mile posts are taken out or are decayed? A. Yes, sir; they do.

Q. The same with the crossing signs and whistling posts? A. Yes, sir.

Q. They do all such work as that? A. Yes, sir.

Q. How much time during each summer is devoted to repairing sign posts and whistling posts and such work as that? A. That would be a very small portion of the time.

Q. It would be a small item in the account? A. Yes, sir.

Q. Do the section men have anything to do with the bridges and culverts? A. No, sir.

Q. Nor do they have anything to do with the depot buildings? A. No, sir.

Q. They have nothing to do with structures of any kind, such as bridges and buildings? A. No, sir.

Q. Do the section men do what repairing is necessary to the fences along the right of way? A. Yes, sir.

Q. About how much fence is there on the right of way

on the lines under your supervision? A. I do not remember how much right of way fence we have got.

Q. Have you any idea about what it was? A. I have got a record of it at home, but I could not say how much it was now.

Q. You would not feel safe in giving an opinion? A. No, sir; I would not.

Q. Do section men look after keeping the stock yards in repair? A. No, sir.

Q. That is, if the fence should break down or anything of that kind? A. No, sir.

Q. The bridge and building department looks after that? A. Yes, sir.

Q. They have nothing to do with the water stations? A. No, sir.

Q. Are you familiar with the other lines of your company in South Dakota? A. No, sir; I am not.

Q. You have not traveled over them so as to know much about them? A. No, sir.

Q. Can you tell the per cent. of curvature on the line from Milbank to Aberdeen—what the average is? A. Degree of the curvature?

Q. Yes, sir. A. From one to three degrees.

Mr. Kittredge: That is the maximum curvature?

The Witness: Yes, sir.

Q. And on your line, you pass through a range of hills? A. Yes, sir.

Q. You have considerable of what is termed "rough road"? A. Yes, sir; it is.

Q. About how much of the line between Milbank and

Aberdeen might be said to be rough—that is, passes through a rough country? A. Well, the line from Twin Brooks to Andover passes through a rough country over there.

Q. About how many miles is that? A. I think it is about sixty-one miles.

Q. And that line requires a good deal more attention than on a level prairie, does it? A. Yes, sir.

Q. Requires more repairs and closer attention? A. Yes, sir.

Q. The ties that you receive are car-lots, are they? A. Yes, sir.

Q. About how many ties, on the average, to the car-load? A. I do not know what the average would be; about two hundred and ten or fifteen ties, I think.

Q. Depending, of course, on the size of the cars? A. Yes sir; there is a large difference in the size of the cars.

Q. But take the average, ordinary car, it would take about two hundred and twenty? A. I think about two hundred and fifteen or twenty.

Q. What kind of tires do they use—cedar, oak or hemlock? A. Cedar, mostly.

Q. Where are those cars billed from? A. They come to me from Minneapolis—they are re-billied at Minneapolis.

Q. Do you know where they originate? A. No, sir.

Q. You do not know where the ties come from? A. No, sir.

Q. What size are the ties? A. Seven by eight, I think.

Q. Seven inches thick? A. By eight inches thick.

Q. Eight inch face? A. Yes, sir.

Q. How many ties do they use to a rail? A. Well, we have got different length of rails.

Q. Take the standard length of rails for length—thirty feet? A. Well, they will average about eighteen ties—eighteen or nineteen, I think.

Q. What portion of the line from Milbank to Aberdeen is ballasted? A. Well, any of the track is only ballasted in places along. It is only ballasted in places along.

Q. Is there any portion of that line outside of the station yards that is ballasted with rock or gravel? A. We have no rock ballast; we have some gravel ballast.

Q. Do you know about what per cent. of the line is ballasted with gravel? How many miles between Milbank and Aberdeen, outside of station lines? A. About fifty miles, I think.

Q. And is that a gravel ballast? A. Well, it was ballasted with gravel about ten or eleven years ago.

Q. Has that been maintained? A. No, sir; it is worn out now.

Q. You say your section men began work this spring about the 10th of April? A. Somewhere along there, I could not say the date now.

Q. What is the first work they went at? A. Putting in ties, I think.

Q. What do they do when they get through with that? A. They have not got through with that yet.

Q. How long do you think it will take them to do that work? A. I could not say just how long it will take.

Q. How long does it ordinarily take? A. It will take up most of next month, I guess, to get the ties in.

Q. Will you be through by the first of June? A. I think so.

Q. How much time does it ordinarily take them? A. Well, I think about six weeks, if they could work at it steady.

Q. They have other duties to perform while they are doing this work? A. Yes, sir.

Q. Have you a complete list of the section men and the section foremen under you? A. Yes, sir; I have.

Q. Have you any such record with you? A. Why, no; I have not a list of them, of course I know where they are located, etc.

Q. Can you tell how many section foremen are at work on your division to-day? A. There is nineteen of them.

Q. Can you tell us—and how many men have they employed under them? A. There should be fifty-seven section men if they are all at work.

Q. You could not say whether all the gangs have three men in or not? A. All the gangs have not got three men, but that is what I am allowed.

Q. That is what you are allowed for a full complement? A. Yes, sir.

Q. Fifty-seven? A. Yes, sir.

Q. Does that include the section foremen? A. No, sir.

Q. So that the section foremen and men would be seventy-six? A. Yes, sir.

Q. That would constitute the full force? A. There is fifty-seven laborers and nineteen foremen.

Q. Do you ordinarily keep the force up to that maximum? A. We always do.

Q. You always keep it up to the full allotment? A. Of course, during harvest, we may be short—it is hard to get men to work on the tracks during harvest.

Cross-Examination by Mr. Kittredge.

Q. Did you build any snow fence last fall? A. Yes, sir.

Q. Have you a statement of the amount expended on the construction of this fence? A. Yes, sir; I have.

Q. You may give us that.

Mr. Null: Objected to as not proper cross-examination.

A. We put out thirty-eight hundred panels of new snow fence last fall.

Q. How much lumber went into the construction of them? A. Four hundred and sixty-four thousand feet.

Q. You may give the other items of expenses that went into the construction? A. I have not got the items of construction of those thirty-eight hundred panels. They were built by the bridge and building department. I have got the items as reported for setting the fence up.

Q. Were those expenses incurred by your regular section gang? A. Some is, and some by extra gangs.

Q. Now, you may state. A. We expended ten hundred and ninety-three days at $1.40 per day—that was done by extra men, and fifty-four days at $1.25 per day, and sixty-four days at $2 per day—that is the foremen's wages. Then we employed two hundred days and three-quarters at $1.10 per day, repairing and setting up snow fence.

These were extra men, but they were employed on the section, but classed as extra men.

Q. Have you the total amount of that expense? A. $1,954.20.

Q. How many miles of snow fence are on your line from Millbank to Aberdeen? A. I have got seventy-one miles of portable fence.

Q. How much of stationary fence? A. Eight and one-half miles.

Q. What is the distance of your line from Millbank to Aberdeen, if you remember? A. Ninety-six miles.

Q. When you went on the division ten years ago, the track was already laid, was it? A. The main track was; yes, sir.

Q. Now it is all steel? A. Yes, sir.

Q. You spoke of some of the steel being relaid? A. It was.

Q. What was the condition of the rail as it came to you to put in the tracks—the steel rail? A. The condition was good.

Q. Are all those steel rails which you put in the track ten years ago there now? A. No, sir.

Q. When were they taken out, if any part of them? A. We took out about four and one-half miles last fall.

Q. And put back steel rails, did you? A. Yes, sir.

Q. Are any of the rails going out this year? A. Well, I could not say that I expect to get some this year.

Q. You recommended it? A. Yes, sir.

Q. Asked for it? A. Yes, sir.

Re-direct Examination by Mr. Null.

Q. This charge to foremen, this is to your section foremen, is it not? A. No, sir; they were extra foremen.

Q. This snow fence that you built last year was built by

reason of the fact that they had a severe winter the winter before? A. Well, not altogether that. We will have to renew all of our snow fences from this on, I guess; the fence is used to replace broken and rotten panels.

Q. But the severe winter preceding this was the occasion of a good deal of the repairs? A. Yes, sir.

Q. When you say you have seventy-one miles of portable fence, you mean that you have that much of lineal fence? A. Yes, sir; if it was in one string.

Q. If it was all in one string. As a matter of fact, on the right of way, there is places where the fence is duplicated? A. Yes, sir; and three of them.

Q. Do you mean to say there are fences along seventy miles of the road? A. No, sir; it would make one single line seventy-one miles long.

Q. The greater part of this fence is used through the hills there in that rough line? A. Yes, sir.

Q. You say you put in four and a half miles of rails last year? A. Yes, sir.

Q. Was that through that same country? A. No, sir; it was between Millbank and Twin Brooks.

Q. How far is that? A. Seven miles. We laid one mile right west of Twin Brooks—we really commenced one mile west of Twin Brooks, and laid towards Millbank.

Q. So that when you speak of four and a half miles, that was continuous line you relaid? A. Yes, sir.

Q. These items that you have stated here, in answer to Mr. Kittredge, you have answered them simply from some memorandum you have with you? A. A copy, I copied it from the time books. The time was taken from the time books that were sent to the company.

Q. They requested you to do that? A. No, sir.

Q. How do you happen to have that with you? A. I had it—I made a copy last fall, to see how much it cost to repair and set out the fence, and I happened to have it here in my pocket.

Q. That is what I say; it is a memorandum—you incidentally had it with you? A. Yes, sir; I was not asked to bring it.

Q. You have not any of your regular records with you? A. No, sir.

Q. You have an office at Millbank? A. Yes, sir.

Q. Located at the depot, is it? A. Yes, sir; up stairs in the depot.

Q. And in that office you have these records you have spoken of? A. Yes, sir.

Q. Do you know whether any of the stock yards on that line are paved or planked? A. I do not think they are paved or planked; we have put gravel and cinders in some of them.

MAURICE CONNELL, being called as a witness on behalf of the defendant, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, testified as follows:

Direct Examination by Mr. Noll.

Q. Where do you reside? A. Sioux Falls.

Q. How long have you lived there? A. Two years.

Q. What is your occupation? A. Section foreman.

Q. How long have you worked for the St. Paul Company?

A. In February, 1891, and then I worked three years prior to that time that I have been off.

Q. How long have you been section foreman? A. About twelve yoars.

Q. For the St. Paul Company? A. No, sir.

Q. You have worked for other companies? A. Yes, sir.

Q. Whereabouts? A. The Sioux road in Minnesota.

Q. How long have you been section foreman for the St. Paul Railway Company? A. In all about ten years.

Q. How long have you been foreman for them in South Dakota? A. Since February, 1891.

Q. Whereabouts is the line of road on which your section is located? A. From Sioux Falls.

Q. Towards Canton? A. Yes, sir.

Q. How many miles are there in your section? A. Six and seven-tenths miles.

Q. Where does your section begin? A. About 600 feet north of the depot.

Q. North of the passenger depot? A. Yes, sir.

Q. So that you have the line through the City of Sioux Falls? A. Yes, sir.

Q, That is your section, is it? A. Yes, sir.

Q. And far enough south to make the distance you have given us? A. Yes, sir.

Q. How many men have you under you? A. Four at the present time.

Q. That is your usual quota—that is the usual number? A. Yes, sir.

Q. You ordinarily maintain that force? A. Yes, sir.

Q. During how many months in the year? A. Well, we put them on the 1st of April, this year.

Q. About what time do you let them go in the fall? A. I think it is about the 1st of November.

Mr. Kittredge: That was last fall?

The Witness: Yes, sir.

Q. What are your duties as section foreman? A. Put in ties, keep the track in surface, cut weeds, repair fences; that is about all, I think.

Q. Have you any snow fence along your section? A. I have only four panels of portable fence down there.

I have got stationary snow fence, I do not know just how much there is.

Q. Is it a part of your duty to keep the stationary snow fence in repair? A. Yes, sir.

Q. That snow fence was constructed before you came here in 1891, was it not? A. No, sir; last fall I built the most of it.

Q. What is the length of the panel snow fence? A. Sixteen feet.

Q. And constructed with a foot so it supports itself, without a post in the ground? A. Yes, sir.

Q. How many boards high? A. I think it is ten—ten or twelve.

Q. And the section men constructed this stationary fence? A. Yes, sir.

Q. Set the posts and nailed up the boards? A. Yes, sir.

Q. About how much of a time does it take you and your men to keep the tracks surfaced? A. Well, I don't know as I can answer that.

Q. That is the principal part of the work, is it not? A. Yes, sir.

Q. As a matter of fact, they are employed at that continuously, except when some other work requires them to look after it? A. Putting in ties and keeping the track in surface.

Q. What is the work your men did this spring, when they went to work? A. Well, this spring we went surfacing.

Q. They are still engaged in that work, are they? A. Yes, sir.

Q. Do you put in the rails when the rail is broken or becomes bad? A. Yes, sir.

Q. And you keep a certain number of rails on hand for that purpose, do you? A. Yes, sir.

Q. About how many? A. One to each mile.

Q. And when the occasion requires it, that rail is placed in the track and a new rail brought to take its place? A. Yes, sir.

Q. And these rails that are set on the posts along the track, one to the mile, are they new rails, or are they what are called relayers? A. Relayers.

Q. Do you know what the brand is on these relayers? A. No, sir; I do not.

Q. Do you know what the brand is upon the rails in the track here—in your section, that is, the most of the rails? A. Seventy-five, I believe.

Q. What kind of a rail is it—iron or steel? A. Steel.

Q. What weight? A. Fifty-six pounds. We have some sixty to the yard here.

Q. What is the weight of these relayers? A. At the present time?

Q. Yes, sir. A. Fifty-six.

Q. How much of your time is devoted to cutting weeds and burning over the right of way and keeping it clear? A. Well, I cannot tell you exactly what that would be.

Q. What is your judgment about it? A. Take it from along the last of May to October, we have genenally gone over the track—it takes about two weeks to go over the tracks cutting weeds; then they have a week surfacing, and then start cutting weeds again.

Q. So, on that basis, from the time you began work, until fall, it takes about two-thirds of your time? A. Yes, sir; somewheres along about that.

Q. When did you say that work ordinarily began? A. About the last of May.

Q. What is the salary of the section foreman? A. Well, I get $50.

Q. And what do the men get? A. $1.10 per day.

Q. You do not do any ballasting, do you? A. With the section crew—yes, sir.

Q. Have you placed any cinder ballast on the track? A. Yes, sir.

Q. Where do you use them? A. We use some in the yard, and some out on the section.

Q. How much of your section is inside the city limits of Sioux Falls? A. Well, I do not know just where the city limits are.

Q. Or the yard limits? A. One mile.

Q. And you also have charge of all the side-tracks? A. Yes, sir.

Q. And how much side-tracks have you in the yards? A. I do not know.

Q. You have quite a little? A. Yes, sir; I never measured it up.

Q. To whom do you report? A. To the roadmaster, J. H. Bowen.

Q. And where does he live? A. At Sioux City.

Q. How often do you report to him? A The 27th of each month.

Q. Are you supplied with the regular blank to make that report? A. Yes, sir.

Q. Have you a copy of such a blank with you? A. No, sir.

Q. What items do you report to him? A. General repairs, putting in ties, repairs of side-track, and that is about all of the principal items—repairs of fence.

Q. You report to him also the material? A. Yes, sir.

Q. And the quantity used? A. Received and used.

Q. And the quantity on hand? A. Yes, sir.

Q. Where do you get your ties from? A. We order them from the roadmaster.

Q. They come to you in car-loads? A. Yes, sir.

Q. How many ties constitute a car-load? A. They will run from one hundred and fifty to two hundred and over.

Q. Owing to the car? A. Yes, sir.

Q. What kind of ties are you using? A. Cedar, hemlock, tamarac and oak.

Q. Where do you get the cedar ties from? A. I don't know.

Q. Do you know where any of them come from? A. No, sir.

Q. Do you know where the cars are billed from? A. No, sir.

Q. You live in Sioux Falls, don't you? A. Yes, sir.

Q. Have you at your house or office a blank such as you make your report from? A. Yes, sir.

Q. To the roadmaster? A. Yes, sir.

Q. Do you keep a copy of this report? A. No, sir.

Mr. Null: Mr. Kittredge, I would like to have one of those blanks.

Cross-Examination by Mr. Kittredge.

Q. Who built the portable fence? A. I do not know.

Q. You don't know who built that? A. No, sir.

Q. And when the ground freezes up in the fall, do you let all your men go? A. One man I keep over the winter.

Q. So that during the winter season you have one section man—one man besides yourself? A. Yes, sir.

Witness excused.

"Defendants' Exhibit 53" marked for identification by special examiner.

Mr. Null: I offer in evidence "Defendants' Exhibit 53," being a statement of Mr. Albert A. Earling as to the passenger car and freight car mileage in South Dakota for the year ending June 30, 1897.

DEFENDANTS' EXHIBIT 53.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY CO.

Office of Second Vice President and General Manager,
Chicago, Illinois.

Chicago, April 5, 1898.

Mr. Kittredge: The total passenger car mileage in South Dakota during the year ending June 30, 1897, was 2,314,755 miles.

The total freight car mileage in the same state during the same period was 10,985,606 miles.

A. J. EARLING.

"Defendants' Exhibit 54" marked for identification by special examiner.

Mr. Null: I offer in evidence "Defendants' Exhibit 54."

Mr. Kittredge: That is objected to as incompetent and immaterial.

DEFENDANTS' EXHIBIT 54.

ANNUAL STATEMENT

OF THE

Chicago, Milwaukee & St. Paul Railway Company

To the State Board of Assessment and Equalization of the State of South Dakota, under authority of an act entitled, "An Act for the Assessment and Taxation of Railroad, Telegraph and Telephone Companies," approved March 6th, 1890,

FOR THE YEAR ENDING APRIL 30TH, 1897.

SCHEDULE A

Showing the whole number of miles of main line or lines and branches, second main, side or turnout track, right of way and improvements thereon, depot grounds, yards, gravel or sand beds, road bed, land for snow protection, owned, operated or leased in each county in South Dakota by said Railway Company.

COUNTIES	RIGHT OF WAY AND IMPROVEMENTS		GROUND AND LANDS Depot Grounds, Yards, Gravel and Sand Beds, and Snow Protection		ROAD BED	TRACK		TOTAL VALUE
	Acres	Value Exc'luding Improvements	Acres	Value	Miles	Main Miles	Second Main Side or Turnout Miles	
Arrange Counties in Alphabetical Order								
IOWA AND DAKOTA DIVISION—MAIN LINE.								
Lincoln	267.20	$2,138	43.30	$346	20.67	20.67	2.20	
Turner	341.62	2,733	57.09	457	26.36	26.36	2.78	
Hutchinson	7.70	62			.31	.31		
McCook	163.30	979	14.30	86	12.08	12.08	.35	
Nanson	309.20	1,855	28.10	169	19.79	19.79	1.15	
Davison	321.00	1,926	33.00	198	18.26	18.26	4.71	
Aurora	488.95	2,445	10.25	51	23.70	23.70	1.25	
Brule	634.90	3,174	35.70	179	28.53	28.53	1.93	
Totals I. & D. Div. Main Line...	2,533.87	$15,312	221.74	$1,486	149.70	149.70	14.37	
RUNNING WATER BRANCH.								
Turner	114.30	$ 914	In I. & D. Div. Main Line		8.35	8.35		
Hutchinson	260.65	2,082	30.55	$244	21.08	21.08	.79	
Bon Homme	418.60	3,349	74.00	592	33.48	33.48	2.66	
Totals Running Water Bch....	793.55	$6,345	104.55	$836	62.91	62.91	3.45	

No Values Listed to Counties.

747

COUNTIES Arrange Counties in Alphabetical Order	RIGHT OF WAY AND IMPROVEMENTS Acres	 Value Excluding Improvements	GROUND AND LANDS Depot Grounds, Yards, Gravel and Sand Beds, and Snow Protection Acres	 Value	ROAD BED Miles	TRACK Main Miles	 Second Main Side or Turnout. Miles	TOTAL VALUE
EDEN BRANCH.								
Lincoln	4.65	$37			.39	.39		
Totals Eden Branch	4.65	$37			.39	.39		
SOUTHERN MINNESOTA DIV.—MAIN LINE.								
Moody	358.65	2,869	51.20	410	25.78	25.78	3.00	
Lake	397.76	2,784	69.35	485	25.34	25.34	4.00	
Miner	464.65	2,788	41.25	248	24.15	24.15	1.31	
Sanborn	408.70	2,044	59.10	296	21.93	21.93	1.03	
Totals S. M. Div. Main Line	1,629.76	$10,485	220.90	$1,439	97.20	97.20	9.34	
MADISON BRANCH.								
Lake	203.83	$1,427	11.36	$80	17.43	17.43	.43	
Kingsbury	315.68	1,894	31.24	187	26.54	26.54	1.38	
Hamlin	134.63	673	18.48	92	11.01	11.01	1.05	
Clark	410.74	2,054	36.07	180	33.76	33.76	1.28	
Day	171.35	857	10.15	51	14.28	14.28	1.08	
Totals Madison Branch	1,236.23	$6,905	107.30	$590	103.02	103.02	5.22	
HASTINGS AND DAKOTA DIV.—MAIN LINE.								
Grant	630.00	$3,150	36.88	$184	31.24	31.24	3.53	
Roberts	266.30	1,332	6.10	30	11.21	11.21	1.00	
Day	916.00	4,580	35.35	177	39.53	39.53	4.21	
Brown	482.75	2,414	39.15	196	25.04	25.04	1.87	
Totals H. & D. Div. Main Line.	2,295.05	$11,476	117.48	$587	107.02	107.02	10.61	
WHETSTONE BRANCH.								
Grant	122.20	$611	123.70	$618	9.27	9.27		
Roberts	667.28	3,336	50.70	253	27.97	27.97	1.16	
Totals Whetstone Bch	789.48	$3,947	174.40	$871	37.24	37.24	1.16	

748

No Values Listed to Counties.

HARLEM BRANCH.							
Day	168.50	$ 843	7.60	$38	13.85	13.85	.30
Marshall	310.40	1,553	74.40	372	24.86	24.86	1.25
Totals Harlem Bch	478.90	$2,395	82.00	$410	38.71	38.71	1.55
FARGO BRANCH.							
Roberts	16.70	$83			1.28	1.28	.26
Totals Fargo Branch	16.70	$83			1.28	1.28	.26
JAMES RIVER DIVISION—MAIN LINE.							
Davison	175.20	$1,051	In S. C. & D. Div.		11.63	11.63	
Sanborn	312.55	1,563	7.65	$ 38	22.98	22.98	1.99
Jerauld	55.40	277	10.00	50	4.52	4.52	.36
Beadle	409.12	2,046	20.40	102	31.41	31.41	1.41
Spink	645.60	3,228	44.80	222	42.19	42.19	2.48
Brown	276.80	1,384	6.12	31	15.58	15.58	5.68
Totals Jas. River Div	1,874.67	$9,549	88.97	$443	128.31	128.31	11.92
EDGELY BRANCH.							
Brown	667.00	$3,335	23.35	$117	32.72	32.72	1.12
Totals Edgely Branch	667.00	$3,335	23.35	$117	32.72	32.72	1.12
BOWDLE BRANCH.							
Brown	158.00	$ 790	In H. & D. Div.		11.41	11.41	
Edmunds	783.50	3,918	35.60	$178	45.61	45.61	2.88
Totals Bowdle Branch	941.50	$4,708	35.60	$178	57.02	57.02	2.88
EUREKA BRANCH.							
Edmunds	147.40	$ 737	9.00	$45	12.19	12.19	.29
McPherson	236.42	1,182	18.38	92	14.20	14.20	1.38
Totals Eureka Branch	383.82	$1,919	27.38	$137	26.39	26.39	1.67
ORIENT BRANCH.							
Edmunds	176.70	$ 883	8.60	$ 43	14.88	14.88	.30
Faulk	323.00	1,615	30.70	154	26.11	26.11	1.56
Totals Orient Bch	499.70	$2,498	39.30	$197	40.99	40.99	1.86

No Values Listed to Counties.

COUNTIES Arrange Counties in Alphabetical Order	RIGHT OF WAY AND IMPROVEMENTS Acres	 Value Excluding Improvements	GROUND AND LANDS Depot Grounds, Yards, Gravel and Sand Beds, and Snow Protection Acres	 Value	ROAD BED Miles	TRACK Main Miles	 Second Main Side or Turnout Miles	TOTAL VALUE
SIOUX CITY AND DAKOTA DIVISION—MAIN LINE.								
Union	168.00	$1,680	15.70	$157	22.51	22.51	2.13	
Clay	225.80	2,258	10.30	103	20.87	20.87	1.30	
Yankton	405.50	4,055	36.80	368	31.19	31.19	4.14	
Bon Homme	131.80	1,054	In Running Water Bch.		10.86	10.86	.28	
Hutchinson	361.75	2,894	34.75	278	29.49	29.49	1.65	
Davison	210.75	1,264	8.05	48	14.97	14.97	.50	
Totals S. C. & D. Div.	1,503.60	$13,205	105.60	$954	129.89	129.89	10.00	
ARMOUR BRANCH.								
Hutchinson	90.60	$ 725	In Main Line.		7.51	7.51		
Douglas	174.20	1,045	11.90	$71	12.94	12.94	1.50	
Totals Armour Bch	264.80	$1,770	11.90	$71	20.45	20.45	1.50	
SIOUX FALLS BRANCH.								
Union	74.40	$ 744	In Main Line.		5.89	5.89	.09	
Lincoln	316.40	2,531	22.20	$178	25.03	25.03	2.71	
Minnehaha	298.00	2,980	34.50	345	26.76	26.76	4.80	
Moody	121.35	971	8.15	65	10.13	10.13	.19	
Totals Sioux Falls Branch	810.45	$7,226	64.85	$588	67.81	67.81	7.89	
Totals in State		$101,195		$8,904	1,101.05	1,101.05	84.80	

No Values Listed to Counties.

750

SCHEDULE B.

Showing Bridges, Culverts, Depots and other Buildings, including Machinery and Tools therein, owned, operated or leased in South Dakota by said Railway Company.

COUNTIES. Arrange Counties in Alphabetical Order.	Passenger and Freight Houses		Water Tanks and Pump Houses		Elevators and Grain Houses		Engine and Round Houses		Machine, Car and Repair Shops and Tool Houses			Other Buildings		TOTAL VALUE
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	Value of Machinery and Tools	No.	Value	
IOWA AND DAKOTA DIVISION—MAIN LINE.														
Lincoln	4	$1,600	4	$820					3	$ 60	$30	8	$ 830	$3,340
Turner	2	920	3	660			1	$ 160	4	80	40	7	550	2,410
Hutchinson									1	20	10	2	80	1,030
McCook	1	480	1	440					1	20	10	7	360	1,990
Hanson	3	1,320	1	280			1	5,600	8	200	80	11	1085	8,423
Davison	3	1,160	2	298					1	20	10	9	725	2,245
Aurora	2	920	2	570			1	400	4	120	40	14	1,080	3,700
Brule	5	1,760	2	300										
Total Iowa and Dakota Division Main Line														$23,138
RUNNING WATER BRANCH.														
Turner									2	$40	$20	5	$260	1,500
Hutchinson	2	$ 880	1	$300			1	$1,600	4	80	40	10	915	5,067
Bon Homme	5	1,980	3	452										
Running Water Branch														$5,567
SOUTHERN MINNESOTA DIV.—MAIN LINE.														
Moody	3	$865	1	$65			1	$235	3	$10	$30	14	$395	1,600
Lake	3	865	2	415			1	3,060	6	25	40	15	880	5,215
Miner	3	775	1	110					2	10	20	7	130	1,045
Sanborn	3	485	1	125			1	250	2	10	20	6	45	955
Total Southern Minnesota Div.—Main Line														$8,815
MADISON BRANCH.														
Lake	1	$ 360							1	$10	$10	4	$125	505
Kingsbury	3	1,115	1	$250					3	20	30	13	425	1,840
Hamlin	1	415	1	250					1	10	10	7	400	1,085
Clark	4	1,585	2	510					4	30	40	17	555	2,720
Day	2	400					1	300	1	10	10	4	145	865
Total Madison Branch														$7,015

COUNTIES. Arrange Counties in Alphabetical Order.	Passenger and Freight Houses No.	Passenger and Freight Houses Value	Water Tanks and Pump Houses No.	Water Tanks and Pump Houses Value	Elevators and Grain Houses No.	Elevators and Grain Houses Value	Engine and Round Houses No.	Engine and Round Houses Value	Machine, Car and Repair Shops and Tool Houses No.	Machine, Car and Repair Shops and Tool Houses Value	Machine, Car and Repair Shops and Tool Houses Value of Machinery and Tools	Other Buildings No.	Other Buildings Value	TOTAL VALUE
HASTINGS AND DAKOTA DIVISION—MAIN LINE.														
Grant	5	$1,530	2	$ 610			1	$6,400				5	$ 990	9,530
Roberts	1	400										2	560	960
Day	4	2,240	5	1,600			1	600	1	$10	$10	4	1,360	5,820
Brown	3	1,360	1	320										1,680
Total Hast. and Dak. Div. Main Line														$17,990
WHETSTONE BRANCH.														
Grant														
Roberts	3	$1,320												1,320
Total Whetstone Branch														$1,320
HARLEM BRANCH.														
Day	1	$ 160												160
Marshall	3	1,600	1	$640								2	$400	2,640
Total Harlem Branch														$2,800
FARGO BRANCH.														
Roberts	1	$320	1	$300										620
Total Fargo Branch														$620
JAMES RIVER DIV.—MAIN LINE.														
Davison														
Sanborn	2	$1,120	1	$320	1	$240			3	$40	$30	7	$ 875	2,625
Jerauld	1	560	1	260					1	10	10	3	250	1,090
Beadle	3	1,680	1	320					3	36	30	9	380	2,446
Spink	4	2,240	3	960	1	150			5	60	50	14	1,100	4,560
Brown	3	2,840	2	520			1	$6,600	6	90	60	13	3,110	13,220
Total James River Div. Main Line														$23,935
EDGELY BRANCH.														
Brown	2	$1,120	2	$640					2	$25	$20	6	$215	2,040
Total Edgely Branch														$2,040

759

BOWDLE BRANCH.

Brown												
Edmunds	4	$2,240	2	$640	1	$400	6	$75	$60	12	$1,330	4,745
Total Bowdle Branch												$4,745

EUREKA BRANCH.

Edmunds	1	$ 560					1	$15	$10	4	$260	845
McPherson	2	1,120	1	$320			2	30	20	9	800	2,290
Total Eureka Branch												$3,135

ORIENT BRANCH.

Edmunds	1	$ 560	1	$320			1	$15	$10	4	$ 260	1,165
Faulk	3	1,680	2	640			3	40	30	13	1,135	3,525
Total Orient Branch												$4,690

SIOUX CITY AND DAKOTA DIV.—MAIN LINE.

Union	3	$ 640	2	$ 370	1	$360	4	$188	$40	5	$ 625	2,223
Clay	4	1,270	1	440			4	50	40	9	700	2,500
Yankton	3	1,500	4	1,100	1	720	5	65	50	10	1,280	4,715
Bon Homme							2	25	20			45
Hutchinson	2	1,360	1	480			2	30	20	7	1,180	3,070
Davison	1	680	1	480			2	30	20	3	485	1,695
Total Sioux City and Dakota Div. Main Line												$14,248

ARMOUR BRANCH.

Hutchinson												
Douglas	2	$1,360	1	$480	1	$360	2	$30	$20	7	$1,300	3,550
Total Armour Branch												$3,550

SIOUX FALLS BRANCH.

Union			1	$460								460
Lincoln	3	$ 660	1	480			3	$30	$30	6	$ 550	1,750
Minnehaha	4	5,280	2	800	1	$1,000	4	45	40	10	1,300	8,465
Moody	1	30					1	10	10	1	50	100
Total Sioux Falls Branch												$10,775

SCHEDULE C.

Showing the amount of "Rolling Stock" owned by said Railway Company in use on each of the lines or branches owned, operated or leased in South Dakota by said Railway Company.

NAME OF LINE	Locomotives		Passenger Cars		Baggage, Mail and Express Cars		Parlor, Sleeping and Dining Cars		Box, Freight and Stock Cars		Platform and Coal Cars		Other Cars and Miscellaneous Rolling Stock and Portable Machinery		TOTAL VALUE
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	
Iowa & Dak. Div., Main Line.	10	$35,000	3	$3,000	4	$2,000			100	$15,000	12	$1,440	35	$2,350	$60,790
Iowa & Dak. Div., Running Wat. Brch	1	2,500	1	1,000	1	500			12	1,800	2	240	16	160	6,200
Iowa & Dak. Div., Eden Bch.	Only 39/100 of a mile in So. Dakota—impracticable to apportion Rolling Stock to it.														
So. Minn. Div., Main Line....	1	3,000	1	1,000	1	400			90	13,500	5	600	26	1,560	20,060
So. Minn. Div., Madison Bch.	1	3,000	1	1,000	1	400			15	2,250	2	240	20	200	7,090
H. & D. Div., Main Line.....	5	15,000	2	2,000	3	1,200	1	2,500	75	11,250	10	1,200	24	240	33,390
H. & D. Div., Whetstone Bch.	1	2,500	1	1,000	1	400			7	1,000	2	240	8	80	5,220
H. & D. Div., Harlem Bch....	1	2,500	1	1,000	1	400			12	1,800	3	360	8	80	6,140
H. & D. Div., Fargo Bch.....	Only 1 28/100 miles in So. Dakota—impracticable to apportion Rolling Stock to it.														
Jas. Riv. Div., Main Line.....	3	9,000	2	2,000	2	800			40	6,000	3	300	28	280	18,380
Jas. Riv. Div., Edgely Bch....	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Bowdle Bch...	1	3,000	1	1,000	1	400			10	1,500	1	100	16	160	6,160
Jas. Riv. Div., Eureka Bch...	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Orient Bch....	Included in Bowdle Branch.														
S. C. & D. Div., Main Line....	6	18,000	5	5,000	3	1,500			45	6,750	2	240	32	320	31,810
S. C. & D. Div., Armour Bch..	1	2,500	1	500	1	500			10	1,500			4	40	5,540
S. C. & D. Div., Sioux Falls Bch	4	10,000	3	1,000	2	1,000			28	4,200	2	240	18	180	18,620
Total.....															$231,520

754

SCHEDULE D.

Showing gross earnings for the year ending April 30th, 1897, of said Railway Company of road, lines and branches owned, operated or leased within the State of South Dakota.

NAME OF LINE.	From Passengers	From Freight	From Express Service	From Telegraph Service	From Mail Service	Miscellaneous	TOTAL
Iowa and Dakota Div— Main Line, Running Water Bch, Eden Bch	$47,633 41	$161,954 71	$9,871 20	$1,586 18	$30,722 40	$3,002 97	$254,770 87
Southern Minn. Div. Main Line, Madison Bch	28,348 74	109,662 40	6,451 44	841 65	15,460 12	2,080 11	162,844 46
Hast. and Dak. Div. Main Line, Whetstone Bch, Harlem Bch, Fargo Bch	54,618 39	358,044 89	13,672 08	1,244 70	22,419 01	4,611 23	454,610 30
James River Div. Main Line, Edgley Bch, Bowdle Bch, Eureka Bch, Orient Bch	54,369 76	136,336 41	11,145 60	1,465 39	30.699 60	3,631 75	237,648 51
Sioux City and Dak. Div. Main Line, Armour Bch, Sioux Falls Bch	129,964 88	234,076 56	14,396 40	833 85	26,071 88	5,668 76	411,012 33
Totals, South Dakota.....	$314,935 18	$1,000,074 97	$55,536 72	$5,971 77	$125,373 01	$18,994 82	$1,520,886 47

SCHEDULE D½.

Showing gross earnings for the year ending April 30th, 1897, of said Railway Company of entire system, lines and branches owned, operated or leased (within and without this State).

NAME OF LINE.	From Passengers	From Freight	From Express Service	From Telegraph Service	From Mail Service	Miscellaneous	TOTAL
Total of entire System....	$5,764,850 26	$21,844,735 36	$720,153 12	$31,205 27	$1,201,649 74	$708,834 07	$30,271,427 82

SCHEDULE E.

Showing net earnings for the year ending April 30th, 1897, of said Railway Company of road, lines and branches owned, operated or leased within the State of South Dakota.

NAME OF LINE.	Gross Earnings	Operating Expenses	Net Earnings
Iowa and Dak. Div.			
Main Line.....			
Running Water Bch.....			
Eden Bch.....	$254,770 87	$213,034 34	$41,736 53
Southern Minn. Div.			
Main Line.....			
Madison Bch.....	162,844 46	147,770 94	15,073 52
Hast. and Dak. Div.			
Main Line.....			
Whetstone Bch.....			
Harlem Bch.....			
Fargo Bch.....	454,610 30	230,751 34	223,858 96
James River Div.			
Main Line.....			
Edgely Bch.....			
Bowdle Bch.....			
Eureka Bch.....			
Orient Bch.....	237,648 51	213,773 20	23,875 31
Sioux City and Dak. Div.			
Main Line.....			
Armour Bch.....			
Sioux Falls Bch.....	411,012 33	312,369 37	98,642 96
Totals, South Dakota.....	$1,520,886 47	$1,117,699 19	$403,187 28

SCHEDULE E½.

Showing net earnings for the year ending April 30th, 1897, of said Railway Company of entire system, lines and branches owned, operated or leased (within and without this State).

	Gross Earnings	Operating Expenses	Net Earnings
Totals of entire system.....	$30,271,427 82	$18,561,592 62	$11,709,835 20

SCHEDULE II

Showing the whole number of miles of railroad and the number owned, operated or controlled by the Southern Railway Company.

April 29th, 2 p. m.

C. C. CRANDALL, a witness called and sworn on behalf of the defendants, testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Crandall, where do you reside? A. Sioux Falls.

Q. What is your occupation at the present time? A. Clerk of the Railroad Commission.

Q. What has been your business in the past? A. Oh, I have been an accountant.

Q. Are you familiar with the different systems of keeping books? A. Yes, sir.

Q. And handling accounts? A. Yes, sir.

Q. I will ask you if you have examined the accounts furnished by the auditing department of the Chicago, Milwaukee and St. Paul Railway Company of the cost of the Pattersonville extension? A. Yes, sir; I have.

Q. What is the total cost as shown by this account? A. $2,939,701.16.

Q. Did you notice the rate at which freight on construction material was charged in this account? A. Yes, sir.

Q. At what rate? A. One cent per ton per mile.

Q. And have you estimated the total amount of freight charged in this account? A. Yes, sir.

Q. You may state it. A. $398,492.54.

Q. Have you estimated the amount charged in this account for ties? A. Yes, sir.

Q. You may state it. A. The amount charged for ties is $203,358.34.

Q. Have you estimated the amount in this account charged for the freight on ties? A. Yes, sir.

Q. You may state it. A. $193,222.07.

Q. Did you notice the amount charged in this account for wind mills, per mill? A. Yes, sir.

Q. You may state it. A. $300 each.

Q. I will ask you to take this account and turn to the final estimate on earth work upon the line from Pattersonville to Mitchell I think you will find it on page 88. A. This appears here as an approximation of the total work.

Q. Turn to page 115. A. The total final estimate for work done to date in constructing the railway from Pattersonville to Mitchell—is that what you want?

Q. Yes. (Question withdrawn.)

Cross-Examination by Mr. Kittredge.

Q. From what did you obtain the figures that you have given? A. From the statement furnished by Mr. Winne.

Q. What statement do you refer to? A. The statement of the Pattersonville extension.

Q. Do all of the figures that you have given appear in the statement to which you have referred? A. Yes, sir.

Q. And you were simply reading from this statement? A That part of it; yes, sir.

Re-Direct Examination by Mr. Nult.

Q. The items you stated as being the amount of freight are computations which you have made from the entries in this account? A. Yes, sir.

Q. They were not read from the account? A. They are all in there.

Q. You gave first the amount of freight, and then you gave the amount of freight on ties. Is the amount that you gave as a charge for freight on ties included in the total freight charge? A. Yes, sir; the first freight given was the total freight as shown on this statement.

Mr. Null: At this time I offer in evidence so much of the Pattersonville extension account as appears on pages 114 and 115 of said account, and which reads as follows:

Total final estimate of work done to date in constructing the railway from Pattersonville to Mitchell, as follows:

332,475 c. yards earth work, at	17¢	$56,520 75
886,507 c. yards earth work	15¢	132,976 05
1,025 yards indurated earth	30¢	307 50
1,167,828 feet B. M. timber in work, per M.	$29	33,867 01
57,845 feet piles driven	32¢	18,510 40
12,451 feet piles, cut off	16¢	1,992 16
25 c. yards solid rock	$1	25 00
240 yards loose rock	35¢	84 00
513 yards chalk rock	35¢	179 55
224 yards masonry	$4	896 00
5,739 bridge ties, sized	15¢	869 85
110.84 miles track laid	$240	26,601 60
Total		$272,829 87

Total final estimate work done to-day in constructing railway from Marion Junction to Running Water:

647,228 cubic yards earth work	15¢	$97,084 20
17,304 indurated earth	30¢	5,191 20
700,811 B. M. timber in work	$29	20,323 52
28,265 feet piles driven	32¢	9,044 80
6,808 feet piles cut off	16¢	10,089 28
1,455 c. yards solid rock	$1	1,455 00
41 yards loose rock, ex	35¢	14 35

7,238 yards chalk rock, ex	35¢	2,533 30
65.32 miles track laid	$240	15,676 80
3,008 bridge ties, sized	15¢	451 20
Total		$152,863 65

The above accounts are all under date of August, 1880.

Mr. Null: I also offer in evidence so much of this account as appears on page 138, under date of November, 1881, which reads as follows:

Final estimate of work done and materials furnished in constructing railway line from Mitchell to the Missouri River, as follows:

748,469 C. yards earth work, at	17½¢	$130,986 80
21 yards riprap	$ 1 50	31 50
321,519 feet timber	28 75	9,243 67
299,018 feet timber	28 75	8,796 76
22,457 feet piles driven	32¢	7,186 24
6,200 feet piles cut off	15¢	930 00
6, 718 feet plank	28 75	193 14
69.56 miles track laid	210 00	14,607 60
Total		$171,775 71

Mr. Kittredge: To the receipt in evidence of the above the complainant, by its counsel, objects for the reason that it is incompetent and immaterial.

Mr. Null: Do you make any question that this is not the account that was furnished us by the auditing department of the Chicago and Milwaukee Railroad Company?

Mr. Kittredge: No; I don't make any question about it. I ask to have that marked, and I offer the balance in evidence.

Document here marked by the special examiner as "Defendants' Exhibit 55."

Mr. Null: It is agreed by and between counsel for both parties that " Defendants' Exhibit 55 " shall be filed but not included in the printed record.

Direct Examination by Mr. Temple.

Q. Have you compiled a statement showing the gross earnings of the Chicago, Milwaukee and St. Paul Railway system for each fiscal year from and including the year ending June 30, 1885, to and including the fiscal year ending June the 30th, 1897, showing also the gross earnings of the system per month for the period named, and also showing what percentage of the gross earnings for the fiscal year consists of the earnings for the first six months of such fiscal year, and the average percentage for the whole period of thirteen years, and also showing what percentage of the gross earnings for the fiscal year consists of the earnings for the month of September for each of the years named, and the average percentage for the whole period of thirteen years? A. I have.

Q. From what source or sources did you compile that statement? A. From the annual reports of the directors of the Chicago, Milwaukee and St. Paul Railroad Company made to the stockholders.

Q. Printed reports? A. Yes, sir.

Q. Have you got those printed reports with you at this time so that they may be inspected by the examiner and by the opposing counsel. A. Yes, sir; here are the reports. (Handing reports to counsel.)

Q. What percentage of the gross earnings for the fiscal year is comprised by the gross earnings for the first six months of such fiscal year on an average for the period of thirteen years which I have named? I refer to the whole system?

Mr. Kittredge: To that complainant, by its counsel, objects on the ground that is it incompetent and immaterial.

A. The average per cent. for the thirteen years here give is 55.41.

Mr. Temple: I understand that that is the percentage of the gross earnings of the fiscal year constituted by the earnings for the first six months of the fiscal year on an average for the period of thirteen years named? A. Yes, sir.

Q. Now, what is the average of the gross earnings of the fiscal year, constituted by the earnings for the month of September in each of said fiscal years, taking the average for the period of thirteen years named; I refer again to the whole system?

Mr. Kittredge: Complainant, by its counsel, objects to the question on the ground that it is incompetent and immaterial.

A. The average for the thirteen years is 9.57 per cent.

Cross-examination waived.

W. H. TOMPKINS, a witness called on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Temple.

Q. What official position, if any, do you hold in this state? A. I am one of the Board of Railroad Commissioners.

Q. How long have you held such position? A. Since January, 1897.

Q. Have you compiled a statement of the annual ex-

penditures of the Chicago, Milwaukee and St. Paul Railway system for repairs of fences, repairs of buildings, fuel consumed, repairs of track, renewal of rails, renewal of ties and repairs of bridges from and including the fiscal year ending June, 1888, down to and including the fiscal year ending June 30, 1897? A. Yes, sir.

Q. From what source or sources, Mr. Tompkins, did you compile such statement? A. From the printed reports of the directors of the Chicago, Milwaukee and St. Paul Railway Company to the stockholders.

Q. And have you those printed reports in court at this time for the inspection and examination of the opposing counsel? A. Yes, sir; I have.

Q. Does this statement compiled by you show the average amount of those separate expenditures for the entire period named? A. It does; yes, sir.

Q. Please produce that statement and let it be marked.

(Paper here marked by the special examiner "Defendants' Exhibit 56."

Mr. Temple: Explain what reason you had for taking the period covered by this statement and for not going back of the year 1888? A. Because the system did not have as many miles of railroad prior to 1888, as the basis of that statement or account.

Q. Did it have as many miles in 1888 as it has now? A. No, sir.

Q. What is the difference—how many miles less did it have in 1888? A. 475.68 miles.

Q. What was the total miles of main track owned by the Chicago, Milwaukee and St. Paul Railway Company in 1894, as shown by these printed reports? A. 6,147.77 miles.

Q. What is the average amount expended by this system of railroad for repairs of fences for the entire period covered by your statement? A. $66,641.

Q. And the average amount expended during the same period for repairs of buildings?

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. $230,610.

Mr. Temple: What is the average amount expended upon the system per year for fuel consumed during this period? A. $2,120,465.

Q. For repairs of track? A. $1,592,190.

Q. For renewal of rails? A. $540,827.

Q. For renewal of ties? A. $838,249.

Q. For repairs of bridges? A. $596,465.

Mr. Temple: We now offer in evidence statement marked as "Defendants' Exhibit 56."

Mr. Kittredge: Complainant objects to its receipt in evidence for the reason that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 56.

CHICAGO, MILWAUKEE AND ST. PAUL RAILROAD.

Annual Expenditures for Enumerated Repairs for Years Named Below.

Years.	Repairs of Fences.	Repairs of Buildings.	Fuel Consumed.
1888	$86,560	$178,144	$2,344,886
1889	49,297	170,233	2,087,890
1890	48,220	157,947	1,998,325
1891	60,461	212,669	2,040,290
1892	91,293	266,574	2,284,281
1893	65,964	267,240	2,552,376
1894	73,886	249,986	2,276,494
1895	67,067	196,326	1,813,415
1896	74,994	301,411	2,008,513
1897	48,673	305,572	1,798,180
Totals	$666,415	$2,306,102	$21,204,650
Average per year	66,641	230,610	2,120,465

Years.	Repairs of Track.	Renewal of Rails.	Renewal of Ties.	Repairs of Bridges.
1888	$1,053,375	$344,115	$590,879	$458,229
1889	1,095,141	343,578	851,228	612,361
1890	1,224,684	274,918	632,577	781,395
1891	1,517,324	457,657	833,189	682,680
1892	1,756,214	744,556	838,977	537,897
1893	2,265,460	1,046,257	978,202	373,158
1894	1,892,862	593,078	962,036	376,233
1895	1,425,383	454,113	900,241	660,332
1896	1,803,163	468,727	925,379	801,048
1897	1,788,295	681,274	829,820	681,317
Totals	$15,921,901	$5,408,273	$8,382,498	$5,964,650
Average per year	1,592,190	540,827	838,249	596,465

Explanation.—The reason for not going back of 1888 is that that was the first year in which the system owned as many miles of road as it does now.

Total length of main track in 1897 is.....6,153.83 miles
Total length of main track in 1888 was.....5,678.15 "

475.68 "

In 1894 the total miles of main track was 6,147.77.

Mr. Temple: Did you also prepare a statement showing the net earnings of the Chicago, Milwaukee and St. Paul Railway Company, as a system, from and including the fiscal year ending June 30, 1883, down to and including the 31st day of December, 1897? A. Yes, sir.

Q. From what source or sources did you compile that statement? A. From the printed reports of the directors of the Chicago, Milwaukee and St. Paul Railway Company to the stockholders, with the exception of the last item, and that is made up from a statement furnished by Mr. Winne to the commissioners in Chicago,

Q. Do you mean the last item in the earnings for the last six months of 1897? A. Yes, sir.

Q. What do you mean by net earnings? A. The earnings over and above the operating expenses and taxes.

Q. What is the amount of the net earnings of the system for the period I have mentioned?

Mr. Kittredge: Complainant objects to the question on the ground that it is incompetent and immaterial.

A. $162,540,012.

Mr. Temple: I now offer in evidence statement marked "Defendants' Exhibit 57."

Mr. Kittredge: Complainant objects to the receipt of said statement in evidence on the ground that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 57.

Statement of net earnings of the Chicago, Milwaukee and St. Paul Railroad .or the years as shown below.

	Net Earnings.
1883.....	$9,881,785
1884.....	9,611,369
1885.....	9,900,801
1886.....	10,158,139
1887.....	10,039,430
1888.....	8,252,425
1889.....	8,874,173
1890.....	9,232,610
1891.....	9,137,724
1892.....	11,468,503
1893.....	12,030,485
1894.....	11,213,618
1895.....	10,291,616
1896.....	13,005,020
1897.....	11,909,228
	7,533,086—Last six months of 1897.
	$162,540,012

By net earnings is meant excess of earnings over and above all operating expenses, including repairs, renewals, taxes and insurance.

Mr. Temple: Did you also prepare a statement of the amounts paid by this railway system for interest and dividends from and including the fiscal year ending June 30, 1884, to and including the fiscal year ending June 30, 1897? A. Yes, sir.

Q. And from what source or sources did you compile said

[illegible]

Q: [illegible]

A: [illegible]

Q: [illegible]

A: [illegible]

Q: [illegible]

A: [illegible]

DEFENDANTS' EXHIBIT 58.

Statement of Amounts Paid for Interest and Dividends for the Years as Shown Below.

Year.	Interest.	Dividends.
1884	$5,918,608	$3,321,166
1885	6,096,573	2,394,038
1886	6,241,092	3,053,076
1887	6,456,637	3,257,523
1888	7,048,976	2,270,732
1889	7,054,470	972,490
1890	7,214,154	1,296,829
1891	7,237,251	1,532,153
1892	7,161,736	1,572,613
1893	7,065,215	3,789,663
1894	7,503,747	3,681,590
1895	7,629,377	3,199,621
1896	7,611,928	3,227,131
1897	7,663,868	3,737,453
	$97,903,632	$37,306,078

Mr. Temple: Have you any knowledge of the statement furnished to your commission by the auditor of the Chicago, Milwaukee and St. Paul Railway Company, and at their request, showing the percentages on which joint traffic earnings are divided between the Chicago, Milwaukee and St. Paul Railway system and the Iowa Central Railway Company and between the Chicago, Milwaukee and St. Paul Railway sytsem and the Des Moines, Northern and Western Railway Company? A. Yes, sir.

Q. Have you such statement with you at this time? A. Yes, sir.

Q. Is this statement marked "Defendants' Exhibit 59" the same statement furnished to the commissioners or their attorneys by the auditor of the complainant railway company? A. Yes, sir.

Mr. Temple: We offer in evidence Defendants' Exhibit 59.

Mr. Kittredge: Complainant objects to the receipt in evidence of Exhibit 59, for the reason that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 59.

Record of Divisions between Des Moines, Northern and Western Railway, and the Chicago, Milwaukee and St. Paul Railway, and Iowa Central Railway, and Chicago, Milwaukee and St. Paul Railway.

CHICAGO, MILWAUKEE AND ST. PAUL RY.,
Freight Auditing Department.
January 31st, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.

Joint revenue between this company and the Des Moines, Northern and Western is divided on the following basis:

Between all points on the Des Moines, Northern and Western and all stations on this company's line in the State of Iowa, in the State of Illinios and in the State of Wisconsin south of Centralia and Green Bay, the divisions are sixty per cent. for the Chicago, Milwaukee and St. Paul Railway and forty per cent. for the Des Moines, Northern and Western.

Between all stations on the Des Moines line and all stations on the Chicago, Milwaukee and St. Paul, in the State of Missouri, Minnesota, North and South Dakotas, and Wisconsin, north of Centralia and Green Bay and the State of Michigan, the divisions of sixty-five per cent for the Chicago, Milwaukee and St. Paul and thirty-five per cent. for the Des Moines apply.

Chicago, December 20th, 1897.

Mr. D. W. Keyes, Mr. R. S. Dousman, Mr. H. P. Elliott, Mr. W. A. Gorman:

Dear Sirs—In division of revenues on grain and flour, carloads, between all stations on our river division, includ-

ing St. Paul, Minneapolis and Minnesota transfer, Wabasha and I. & M. Division in Minnesota, S. M. Divisions east of and including Winnebago City and Mankato and H. & D. Division east of and including Benton Jct. and Peoria, Ill., in connection with the Iowa Central via Mason City, we will receive 45% per cent., Iowa Central 55 per cent., effective November 18th. This applies on traffic for Peoria proper, as well as in division of revenue west of Peoria on shipments destined beyond.

Yours truly,

N. J. GOLL,
A. G. F. A.

Chicago, October 1st, 1897.

Mr. D. W. Keyes, Mr. R. S. Dousman, Mr. H. P. Elliott, Mr. W. A. Gorman:

Dear Sir—I hand you herewith sheet showing new divisions with the Iowa Central road to apply from September 1st, 1897, and which is to supersede all conflicting arrangements. Please make record and be governed accordingly.

Yours truly,

N. J. GOLL,
A. G. F. A.

Iowa Cent. File No.....

Cancelling File No. 81 of 1894.

IOWA CENTRAL RAILWAY COMPANY

AND

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY

DIVISIONS.

Between C., M. & St. P.	and I. C. and L. & C.	Kind of Freight.	Route Via	Divisions. Iowa Cent.	C., M. & St. P.
Formula I— Chicago, Milwaukee and common points except as otherwise provided.	Stations in Iowa.	All fr't except grain, flax and millet seed.	As per tariff.	40% See note I.	60%
Formula II— Do.	Do.	Grain, flax and millet seed C. L.	Do.	Remainder.	7.5 cents per 100 pounds.
Formuma III— Stations in Iowa and Missouri.	Stations in Illinois.	Grain C. L.	Do.	5 cents per 100 pounds.	Remainder.
Formula IV— Stations on LaCrosse Div. west on Portage to and including Onalaska and LaCrosse; Wis. Val. Div. South of Wausau, incl., and stations on the Chippewa Val. Div.	Stations in Iowa.	All fr't except lumber.	Do.	50%	50%
Formula V— All stations in Iowa and Missouri, including Kansas City, Mo.; also Omaha and South Omaha, Neb.; also stations on S. C. & D. Div., Canton to Sioux City.	Stations in Illinois.	All fr't except grain.	Do.	Mileage pro rate min. 25% to short line. See note II.	
	Stations in Iowa.	All fr't except coal.	Do.	Iowa Cent. 50% (See note II.)	C., M. & St. P. 50%
Formula VI— Do.	Stations in Iowa.	Coal.	Do.	40 cents per ton.	Remainder.

Between C., M. & St. P.	and I. C. and A. & C.	Kind of Freight.	Route Via	Divisions. Iowa Cent.	C., M. & St. P.
Formula VII—					
All stations on River Div., including St. Paul, Minneapolis and Minnesota transfer.	Stations in Iowa.	All fr't except Coal.	Mason City Jct.	50%	50%
Wabasha and I. & M. Div. in Minnesota.	Stations in Illinois. See	All fr't.	Do.	Mileage pro rate min. 25% to short line.	
S. M. Div. Winnebago City and East, including Mankota H. & D. Div. East of and including Benton Jct., Dub. Div., North of New Albin, including Preston Branch.	Exception formulae 8 and 3.				
Formula VIII—					
All Stations on River Div., including St. Paul, Minneapolis and Minnesota trf.; Wabasha and I. & M. Div. in Minnesota; S. M. Div. Winnebago City and East, including Mankato; H. & D. Div., Hopkins to Benton Jct., inclusive.	Peoria, Ill.	All fr't except grain and flour.	Mason City Jct.	60%	40%
Formula IX—					
St. Paul, Minneapolis and Minnesota Transfer.	Peoria, Ill.	Grain and flour.	Do.	55%	45%
Formula X—					
Stations in Minnesota, North and South Dakota, west of territory described in formula VII.	Stations in Iowa and Illinois.	All fr't.	As per tariff.	Mileage pro rate min. of 25% to short line.	
Formula XI—					
Necedah, Tomah and all stations on Wis. Valley Div.; all stations on Chippewa Val. Div., Fond du Lac, Oshkosh, Omro, Winneconne.	Stations in Ia., Manley Jct. to Marshalltown, inclusive, including Belmond Branch.	Lumber C. L.	Do.	30%	70%
	Stations So. of Marshalltown, including Story City Branch.	Do.	Do.	40%	

Between C., M. & St. P.	and I. C. and I. & C.	Kind of Freight.	Route Via	Divisions. Iowa Cent.	C., M. & St. P.
Stations on the Superior Division.	Stations in Iowa.	Do.	Do.	Regular proportion of Wausau rates.	Balance.
Formula XII— Winona, LaCrosse, Prairie du Chien.	Stations in Iowa.	Do.	Do.	50%	50%
Lansing, Stillwater and McGregor.					
Formula XIII— Maquoketa, Iowa.	Marshalltown Iowa.	Line C. L.	Pickering.	2 cents per 100 pounds.	Remainder.

Divisions shown herein to and from Chicago or Peoria will also govern in dividing porportion accruing west of Chicago or Peoria on Eastern business.

It is also understood that where arbitrary Divisions are not agreed to, mileage basis minimum 25 per cent. to the short line is to govern.

Note I—Iowa Central will receive Chicago divisions on traffic to and from points on the C. M. & St. P. in Wisconsin and Michigan taking higher than Chicago rates.

Note II—On business from or to South Omaha, deduct following arbitraries before prorating and add to C. M. & St. P. proportion: Car Loads, 3 cents per 100 lbs., maximum $8.00 per car; L. C. L., 6 cents per 100 pounds; charge upon any one lot not to exceed $6.00.

On carload traffic to or from points east of Chicago routed via E. J. & E. Ry., the car haul allowance to the E. J. & E. will be paid out of the C. M. & St. P. proportion, the Iowa Central to receive the same proportion as on shipments routed via Chicago.

Mr. Temple: What are the percentages of division between the Chicago, Milwaukee and St. Paul Railway system and the Des Moines, Northern and Western Railroad Company as shown in this Exhibit 59?

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. They have two divisions; under one division sixty per cent. goes to the Chicago, Milwaukee and St. Paul road and forty per cent. to the Des Moines, Northern and Western road, and under the other division, sixty-five per cent. goes to the Chicago, Milwaukee and St. Paul Railroad Company and thirty-five per cent. to the Des Moines, Northern and Western road.

Q. Have you prepared a statement showing the minimum, maximum and average hauls over those two railroads to which the above mentioned division of joint earnings apply? A. Yes, sir; I have.

Q. And does the statement prepared by you correctly show these hauls? A. Yes, sir.

Q. Will you produce such statement and let it be marked?

(Statement here produced by the witness and marked by special examiner "Defendants' Exhibit 60."

Mr. Temple: I offer in evidence Defendants' Exhibit 60.

Mr. Kittredge: Complainant objects to the receipt of such statement in evidence for the reason that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 60.

Percentage of earnings between the C., M. & St. P. Ry. and the roads named in the following list.

60 & 40% division of earnings applies as follows:

Longest haul on the D.-M. & N. W. R. R. is....	49.6	miles
Shortest haul on the D.-M. & N. W. R. R. is less than.....	5	miles
Average haul on the D.- M. & N. W. R. R. is....	20	miles

Longest haul on C., M. & St. P. to Green Bay..	489.9	miles
Haul from Herndon to Chicago.....	377.8	miles

65 & 35% of earnings applies as follows:

For points on the D.-M. & N. W. R. R. to points on the C., M. & St. P. R. R., where the distance on the C., M. & St. P. R. R. exceeds....	489.9	miles

Mr. Temple: Have you also prepared a statement showing how the earnings on joint freight shipments over the Chicago, Mliwaukee and St. Paul Railroad and the Union Pacific road are divided between those two roads and also showing the length of the respective hauls over the respective roads to which this division of joint earnings applies? A. Yes, sir.

Q. Will you produce that statement?

(Statement here produced and marked by the special examiner "Defendants' Exhibit 61.")

Mr. Temple: I will ask you to read off and explain the first line of this statement? A. The first line reads: "Chicago, 492 miles, 63.5%; Fremont, 37 miles, 36.5%." That is, a shipment from Fremont to Omaha is thirty-seven miles.

There is where connection is made with the Chicago, Milwaukee and St. Paul Railway Company, and then the haul from Omaha to Chicago is 492 miles.

Q. How are the earnings of such joint shipments divided? A. The Chicago, Milwaukee and St. Paul road receives sixty-three and five-tenths per cent. of the shipment and the Union Pacific receives thirty-six and five-tenths per cent. of the shipment.

Q. Do I understand that the length of the haul over the Milwaukee road and the percentages of the joint earnings allowed to that road are shown at the left hand side of the page, and the length of the hauls over the Union Pacific and the percentages of the joint earnings allowed to that road are shown at the right hand side of this statement? A Yes, sir; and Omaha is the dividing point.

Mr. Temple: We offer in evidence this statement, which is marked Defendants' Exhibit 61.

Mr. Kittredge: That is objected to for the reason that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 61.

Percentages of earnings between the C., M. & St. P. R. R. and the Union Pacific R. R. for distances named:

Chicago, 492 miles....	63.5%	Fremont, 37 miles....	36.5%
Chicago, 492 miles....	27 %	Cheyenne, 516 miles...	73 %
Chicago, 492 miles....	48.5%	Kearney, 196 miles.....	51.5%
Chicago, 492 miles....	60 %	Valley, 36 miles.....	40 %
Chicago, 492 miles....	48.5%	Grand Island, 154 miles	51.5%
Chicago, 492 miles....	27 %	Julesburg, 373 miles...	73 %
Chicago, 492 miles....	22 %	Laramie, 574 miles.....	78 %

Transfer is made at Omaha, 492 miles from Chicago.

Mr. Temple: From what source did you obtain the percentage or percentages of division of joint earnings between the Chicago, Milwaukee and St. Paul Railway Company and the Union Pacific Railway Company? A. From a statement offered in evidence in this case by the Chicago, Milwaukee and St. Paul Railway Company.

Q. Introduced in evidence as Exhibit 13, is it not? A. Exhibit 13, yes, sir.

Q. I will ask you if the general auditor of the complainant railway company has furnished either to you or to the commission a statement showing the earnings to the system received at or forwarded from South Dakota stations and points during the month of September, 1897? A. Yes, sir.

Q. Will you produce that statement at this time?

Statement produced and marked by the special examiner Defendants' Exhibit 62.

Mr. Temple: I offer in evidence statement marked Defendants' Exhibit 62.

Mr. Kittridge; Complanant objects to the receipt in evidence of Defendants' Exhibit 62, for the reason that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 62.

Chicago, Milwaukee & St. Paul Railway Company.

Statement of Freight and Passenger Traffic South Dakota Stations—Month of September, 1897.

FREIGHT.

Received—		
From South Dakota stations....	$ 12,245 57	
From other stations on the line..	139,090 78	
From connections.....	29,082 38	
		$180,418 73
Forwarded—		
To South Dakota stations.....	$ 12,245 57	
To other stations on the line.....	239,806 83	
To connections.....	4,627 14	256,679 54
		$437,098 27
Less revenue on business from South Dakota points to South Dakota points shown above as both forwarded and received.....		12,245 57
		$424,852 70

PASSENGER.

Ticket sales and cash fares—	
From South Dakota stations.....	$47,066 62

General Auditing Department.
Chicago, December 14th, 1897.
W. N. D. WINNE,
General Auditor.

Mr. Temple: I will ask you if this statement shows the earnings on freights carried over South Dakota lines, but both beginning and ending outside of the state, or what is sometimes termed by railroad men "intermediate line hauls"? A. Yes, sir. I do not know the exact name of it. I don't know whether that would apply to that or not. The question up to that point I would answer yes.

Q. I will ask you if you know whether this statement shows the revenue from passenger tickets sold outside of the State of South Dakota for points and stations in that state? A. It does not.

Q. Do you know if the general auditor of the complainant railway company has furnished the defendants in this action with a statement of the freight and passenger earnings in the State of South Dakota lines for the year ending June 30, 1897? A. Yes, sir; they have.

Q. Have you such statement with you? A. Yes, sir.

Q. Please produce it.

Paper here produced and marked by the special examiner Defendants' Exhibit 63.

Q. I will ask you if this Exhibit 63 shows the revenue from mail, express and miscellaneous sources other than from freight and passenger? A. It does not.

Q. Does it show the revenue from freights carried over the South Dakota lines, both beginning and ending outside of the state? A. It does not include any freights that are shipped through the state.

Q. Then you mean to answer my question no? A. I answered the question, it does not include through freight.

Q. I do not know what you mean by through freights? A. Through freights in relation to this state.

Mr. Temple: We now offer in evidence statement marked Defendants' Exhibit 63.

Mr. Kittredge: Complainant objects to the introduction of Exhibit 63, on the ground that it is incompetent and immaterial.

DEFENDANTS' EXHIBIT 63.

Statement of Freight and Passenger Earnings for year ending June 30th, 1897—If Inter-State Earnings are divided on mileage basis, as reported to South Dakota Railroad Commissioners.

	Freight.		Passenger.		Freight and Passenger.	
	Total Revenue.	South Dakota Proportion.	Total Revenue.	South Dakota Proportion.	Total Revenue.	South Dakota Proportion.
Between points in State of South Dakota.....	$ 102,289 23	$ 102,289 23	$ 208,716 19	$ 208,716 19	$ 311,005 42	$ 311,005 42
Forwarded from So. Dakota points to points outside of state and received at So. Dakota points from points outside of state.	3,636,897 23	972,452 63	300,445 48	117,518 71	3,937,342 71	1,089,971 34
Total.....	$3,739,186 46	$1,074,741 86	$509,161 67	$326,234 90	$1,248,348 13	$1,400,976 76
Less South Dakota proportion.....					1,400,976 76	
Proportion to C., M. & St. P. lines outside of South Dakota.....					$2,847,371 37	

General Auditing Department.
February 1st, 1898.

787

6772

Mr. Temple: Have you been furnished by the complainant railway company with a statement showing the gross earnings, operating expenses, net earnings and interest on bonds of the entire system for the six months ending December 31, 1897? A. Yes, sir.

Q. Will you produce the statement?

Statement produced and marked by the special examiner Defendants' Exhibit 64.

Mr. Temple: We offer this statement in evidence—Defendants' Exhibit 64.

Mr. Kittredge: That is objected to as incompetent and immaterial.

DEFENDANTS' EXHIBIT 64.

Chicago, Milwaukee & St. Paul Railway Company—Entire System—Six months ending December 31st, 1897.

Gross earnings	$18,430,280 24
Operating expenses (incl. taxes), 59.13%	10,897,193 81
Net earnings	7,533,086 43
Interest on bonds	3,637,273 53

General Auditing Department.

January 29th, 1898.

Cross-Examination by Mr. Kittredge.

Q. Exhibit 64 refers to the gross earnings, operating expenses, net earnings on the system, does it not? A. Yes, sir.

Q. Exhibit 63 relates to freights and passengers forwarded from South Dakota points to points outside the state and received at South Dakota points from points without the State of South Dakota, as well as the purely local or domestic business? A. Yes, sir.

Q. The only portion of Exhibit 63 referring to purely local or domestic business is the first line of such exhibit; is that correct? A. Yes; those amounts are included in the aggregate amount at the bottom also.

Q. Exhibit 62 does not refer to purely local or domestic business in South Dakota, does it? A. No, sir.

Q. Exhibits 56, 57 and 58 are simple compilations of figures appearing in the report of the directors of the complainant company to its stockholders? A. Yes, sir.

Q. And are, of course, supposed to be correct compilations? A. Yes, sir.

Q. Every figure that appears upon such exhibits, except

the mere compilation, appear in such reports, do they not? A. Yes, sir. Except for the six months ending December 31, 1897.

Whereupon the further hearing was adjourned until 9:30 a. m., April 30, 1898.

10 a. m., April 30th, 1898.

W. H. TOMPKINS, being recalled as a witness on behalf of the defendants, testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Tompkins, are you the chairman of the Board of Railroad Commissioners of the State of South Dakota? A. Yes, sir.

Q. Were you chairman of the board during the months of June, July and August, 1897? A. Yes, sir.

Q. At the time the commission convened for the purpose of promulgating the schedules of maximum freight rates for the State of South Dakota, had a notice been given to the complainant railway company of such meeting? A. Yes, sir.

Q. The last meeting? A. Yes, sir.

Q. The last schedule? A. Yes, sir.

Q. Did any of the officers of the Chicago, Milwaukee and St. Paul Railway Company appear before the commissioners at the time of that hearing? A. Yes, sir.

Q. What statement, if any, did the officers of the complainant make to the commissioners at that time with reference to the expenses incurred maintaining and operating their lines in the State of South Dakota?

Mr. Kittredge: Objected to as incompetent, immaterial and indefinite.

A. They filed a statement of operating expenses and taxes.

Q. And have you that statement? A. Yes, sir; I think it is in the possession of Mr. Temple.

(Witness produces paper, which is marked by the special examiner "Defendants' Exhibit 65."

Q. I will ask you, Mr. Tompkins, if the statement which was filed with the commission at that time relative to operation is the same as "Exhibit 9" now in the record in this case? A. It is the same. That includes 1892 and 1893, and that begins with 1894.

Q. "Exhibit 9" begins in 1894? A. "Exhibit 9" begins in 1894 and that begins in 1892.

Q. I will ask you if at that time or at any time prior to the adoption of the schedule of rates by the commission, if any different statement was made by the complainant with relation to its operating expenses in South Dakota?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. No, sir.

Q. So at that time this was the only information that the commission had, as to what it cost to operate the complainant's lines in South Dakota? A. Yes, sir.

Q. Mr. Tompkins, about how many days were the board in session considering the matter of the adoption of maximum rates? A. Eleven days, I think.

Q. And were the representatives of the railroads present during most of the time? A. Yes, sir; most of the railways.

Q. And were the representatives of the complainant company present during most of the time? A. Yes, sir.

Q. I will ask you if during that meeting and during that hearing any of the roads, and particularly the complainant company, offered any suggestion concerning the adoption of rates or schedule of rates?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. I think not.

Q. Did they at any time during that hearing enter into negotiations whatever with the commission looking to the establishment of any given or particular rate?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. No, sir.

Q. How long was it after the schedule was announced until the temporary injunction in this action was served upon you?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. I do not think I recollect. I think it was a day or two.

Q. I ask you if after the adoption of the schedule of rates if there was any application by the complainant to the commission for any modification or change on that schedule of rates?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. There was not.

Q. Did they make any appearance or application of any kind before the railroad commission after the schedule was adopted and before they sued out the temporary injunction? A. They did not.

Q. I will ask you what kind of a maximum rate the commission sought to establish, as based upon the evidence and facts which you had before you?

Mr. Kittredge: Objected to as incompetent and immaterial, and not the best evidence.

A. A reasonable maximum rate.

Q. And did you as one of the commissioners at that time believe from all the information that you had before you that the schedule adopted was a reasonable maximum rate? A. Yes, sir.

Q. Was a schedule of reasonable maximum rates? A. Yes, sir.

Cross-Examination by Mr. Kittredge.

Q. The schedules filed with the Railway Commission in August, 1897, were, as you stated, substantially like Exhibits "8" and "9" for the years for which such exhibits give information? A. Yes, sir; except under net earnings in "Exhibit 9." I think with that exception they are the same. I have not compared them all though.

Q. It is stated in the exhibit furnished your commission in August, 1897, at the time of your hearing, that the actual earnings and operating expenses of South Dakota were arrived at in a manner recommended by the Convention of Railway Commissioners, in May, 1895, is it not? A. Yes, sir.

Q. It is also stated that earnings in South Dakota were credited with all the earnings derived from business originating and terminating and being carried entirely within this state, and its mileage proportion of all inter-state business? A. Yes, sir.

Q. It also states that the expenses in South Dakota were

charged on a basis of train mileage within the state, does it not? A. Yes, sir.

Q. In that statement it is not claimed to be the actual expenses of the State of South Dakota? A. It is claimed to be as near as they could estimate it.

Q. It is claimed to be based on the train mileage in the state? A. Yes, sir.

Q. And not upon the actual cost? A. It is not upon the actual cost.

Q. At the hearing which you have referred to did not the gentlemen representing the complainant company object to any reduction of rates by your commission, either passenger or freight, upon business transacted of conducted in the State of South Dakota? A. I think they stated there should be no reduction.

Mr. Null: I now offer in evidence so much of the annual report of the Chicago, Milwaukee and St. Paul Railroad Company to the Railroad Commissioners for the State of South Dakota for the year ending June 30, 1895, as appears on page 71 under the head of consumption of fuel by locomotives, State of South Dakota, and which reads as follows:

DEFENDANTS' EXHIBIT 65.

Page 71—Annual Report, 1895—State of South Dakota—Consumption of Fuel by Locomotives.

Locomotives.	Coal—Tons.		Wood—Cords.		Total Fuel Consumed. Tons.	Miles Run.	Av. Pounds Consumed Per Mile.
	Anthracite.	Bitumin's	Hard.	Soft.			
Passenger		57,246		1,205	57,849	1,522,780	75.98
Freight		86,736		1,806	87,649	2,301,126	76.18
Switching		26,561		548	26,835	687,309	78.09
Construction		2,929		73	2,966	78,847	75.24
Total	None	173,472	None	3,652	175,299	4,590,062	76.38
Av. cost at distributing point		$1 84		$1 83	$1 86		

795

4453

Mr. Kittredge: Objected to as incompetent and immaterial.

Mr. Null: I offer in evidence so much of the annual report of the Chicago, Milwaukee and St. Paul Railroad Company to the Railroad Commissioners of the State of South Dakota for the year ending June 30, 1897, as appears upon page 61 of said report.

(Copy of said page marked "Defendants' Exhibit 66" by special examiner.

Mr. Kittredge: Objected to as incompetent and immaterial.

DEFENDANTS' EXHIBIT 66.

Annual Report, 1897—South Dakota.

Passenger and Freight and Train Mileage.

ITEM	Column for Tonnage, Number Passengers, Number Trains, Mileage, Number Cars.	Column for Revenue and Rates. Dollars	Cts.	Mills.
Passenger Traffic:				
Total Passenger revenue—page 35		326,234	90	
Total Passenger earnings—page 35		519,554	56	
Passenger earnings per mile of road		471	87	
Passenger earnings per train mile		1	04	445
Freight Traffic:				
Total Freight revenue—page 35		1,074,741	86	
Total Freight earnings—page 35		1,074,741	86	
Freight earnings per mile of road		976	10	
Freight earnings per train mile		1	38	658
Passenger and Freight:				
Passenger and Freight revenue—page 35		1,400,976	76	
Passenger and Freight revenue per mile of road		1,272	39	
Passenger and Freight earnings—page 35		1,594,266	42	
Pass. and Freight earnings per mile of road		1,447	97	
Gross earnings from operation—page 35		1,605,210	66	
Gross earnings from operation per mile of road		1,457	96	
Gross earnings from operation per train mile		1	26	142
Operating expenses—page 45		1,012,912	04	
Operating expenses per mile of road		919	99	
Operating expenses per train mile			79	598
Income from operation—page 31		592,298	62	
Income from operation per mile of road		537	97	
Train Mileage:				
Miles run by Passenger trains	435,717			
Miles run by Freight trains	589,924			
Miles run by mixed trains	246,901			
Total mileage trains earning revenue	1,272,542			

Mr. Null: Also the same report, pages 43 and 45, copies of which are supplied and marked "Defendants' Exhibit 67."

DEFENDANTS' EXHIBIT 67.

Operating Expenses.

	ITEM.	AMOUNT.
	Maintenance of Way and Structures.	
1.	Repairs of Roadway	$1,605,856.95
2.	Renewal of Rails	681,274.36
3.	Renewal of Ties	829,820.78
4.	Repairs and Renewal of Bridges and Culverts	667,674.31
5.	Repairs and Renewal of Fences, Road-Crossings, Signs and Cattle Guards	217,261.71
6.	Repairs and Renewals of Buildings and Fixtures	310,427.95
7.	Repairs and Renewals of Docks and Wharves.	
8.	Repairs and Renewals of Telegraph	30,699.34
9.	Stationery and Printing	818.59
10.	Other Expenses	
	Total	$4,343,833.99
	Maintenance of Equipment.	
11.	Superintendence	$ 207,127.64
12.	Repairs and Renewals of Locomotives	665,014.21
13.	Repairs and Renewals of Passenger Cars	337,163.21
14.	Repairs and Renewals of Freight Cars	918,509.91
15.	Repairs and Renewals of Work Cars	16,722.98
16.	Repairs and Renewals of Marine Equipment	
17.	Repairs and Renewals of Shop Machinery and Tools	46,587.44
18.	Stationery and Printing	7,064.76
19.	Other Expenses	64,860.20
	Total	$2,263,050.35
	Conducting Transportation.	
20.	Superintendence	$ 348,925.54
21.	Engine and Roundhouse Men	1,931,675.69
22.	Fuel for Locomotives	1,793,881.03
23.	Water Supply for Locomotives	66,322.56
24.	Oil, Tallow and Waste for Locomotives	57,769.07
25.	Other Supplies for Locomotives	17,192.76
26.	Train Service	1,523,149.15
27.	Train Supplies and Expenses	202,939.18
28.	Switchmen, Flagmen and Watchmen	583,987.24
29.	Telegraph Expenses	477,476.47
30.	Station Service	1,349,654.78
31.	Station Supplies	124,253.63
32.	Switching Charges—balance	203,780.61
33.	Car Mileage—balance	210,257.18
34.	Hire of Equipment—balance	
35.	Loss and Damage	102,640.24
36.	Injuries to Persons	167,385.53
37.	Clearing Wrecks	12,010.58
38.	Operating Marine Equipment	
39.	Advertising	29,615.87
40.	Outside Agencies	228,217.19
41.	Commissions included in Passenger Earnings	
42.	Stock Yards and Elevators	37,855.71
43.	Rents of Tracks, Yards and Terminals, page 47; Bal. see pages 41 and 47	152,195.08
44.	Rents of Buildings and other Property	76,533.41
45.	Stationery and Printing	109,608.67
46.	Other Expenses	37,547.27
	Total	$9,838,874.44

	ITEM.	AMOUNT.
	General Expenses.	
47.	Salaries of General Officers	$ 213,699.84
48.	Salaries of Clerks and Attendants	206,600.93
49.	General Office Expenses and Supplies	34,764.55
50.	Insurance	91,217.55
51.	Law Expenses	73,475.35
52.	Stationery and Printing (General Offices)	12,420.16
53.	Other Expenses	115,371.06
	Total	$ 747,549.44
	Recapitulation of Expenses.	
	Renewal Acct	$ 200,000.00
54.	Maintenance of Way and Structures	4,343,833.99
55.	Maintenance of Equipment	2,263,050.35
56.	Conducting Transportation	9,838,874.44
57.	General Expenses	747,549.44
	Total, Excluding Taxes	$17,393,308.22
	Percentage of Expenses to Earnings—Entire Line—Excluding Taxes	57.05
	Operating Expenses—State of South Dakota.	
	Maintenance of Way and Structures	$ 252,966.52
	Maintenance of Equipment	131,787.22
	Conducting Transportation	573,010.92
	General Expenses	43,507.38
	Renewal Account	11,640.00
	Total	$1,012,912.04
	South Dakota Percentage of Operating Expenses to Earnings, Excluding Taxes	63.10

" Defendants' Exhibit 68 " marked for identification by the special examiner.

Mr. Null: I offer in exidence " Defendants' Exhibit 68," which is the schedule governing local freight traffic in the State of South Dakota.

FOLDOUT(S) IS/ARE TOO LARGE TO BE FILMED

H. W. SAWYER, being called as a witness on behalf of the defendant, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Sawyer, what official position do you hold with the Railway Commission of the State of South Dakota? A. I am secretary.

Q. And have you in your possession the different tariff and schedules of rates of the railway companies on file with the commission? A. Yes, sir.

Q. I will ask you if you have the schedule of rates and tariff on wheat and corn, between St. Paul, Minneapolis and South Dakota points? A. I have.

Q. I will ask you to turn to that schedule, and give us the rate on corn and wheat between St. Paul, Minneapolis, Minnesota, and the City of Mitchell, South Dakota.

Mr. Kittredge: Objected to as incompetent and immaterial.

A. From Mitchell, South Dakota, to Minneapolis, Minnesota, wheat, 20 cents per 100 pounds, corn, 18 cents per 100 pounds—the distance is 418.5 miles.

Q. What is the rate between St. Paul, Minneapolis and Chamberlain, South Dakota?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. On wheat, 26 cents per 100; corn, 23 cents—the distance is 485 miles.

Q. The same from Aberdeen, South Dakota, to St. Paul and Minneapolis?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. Wheat, 17 cents; corn, 17 cents; distance, 287.6 miles.

Q. The same from Sioux Falls, South Dakota? A. From Sioux Falls, South Dakota, wheat, 18 cents; corn, 13 cents; distance, 239.6 miles.

Q. The same from Yankton, South Dakota?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. Wheat, 20 cents; corn, 15 cents; distance, 410.9 miles.

Q. Have you the company's tariff on wheat and corn between stations in South Dakota and Chicago? A. Yes, sir.

Q. I will ask you to state the rates on corn and wheat between the same South Dakota points and Chicago, Illinois?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The rate on wheat from Mitchell to Chicago, the distance, 616 miles, is 27 cents; on corn, 24 cents.

The rate on wheat from Chamberlain to Chicago, distance 683 miles, is 30 cents; on corn, 28 cents.

The rate from Aberdeen to Chicago, distance 744.3 miles, on wheat, 27 cents; corn, 27 cents.

From Sioux Falls to Chicago—distance, 595.8 miles; wheat, 25 cents; corn, 19 cents.

The rate from Yankton to Chicago—distance, 578.5 miles; wheat, 27 cents; corn, 22 cents.

Q. Have you the tariff on live stock on car loads between South Dakota points and Chicago? A. Yes, sir.

Q. You may give us the rate on cattle and hogs between the same South Dakota cities you have mentioned and Chicago, Illinois?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The rate from Mitchell to Chicago—distance, 616.5 miles; on cattle, 32 cents per hundred pounds; hogs, 34 cents; sheep, 37 cents.

The rate from Chamberlain to Chicago—distance, 683 miles; cattle, 43 cents; hogs, 43 cents; sheep, 43 cents.

From Aberdeen to Chicago—distance, 744.3 miles; cattle, 38 cents; hogs, 44 cents; and sheep, 44 cents.

From Sioux Falls to Chicago—distance, 595.8 miles; cattle, 25 cents; hogs, 30 cents; sheep, 30 cents.

Yankton to Chicago—distance, 578.5 miles; cattle, 29 cents; hogs, 31 cents; and sheep, 34 cents.

Q. Have you the tariff on live stock between St. Paul and Minneapolis, Minnesota, and South Dakota stations? A. Yes, sir.

Q. I will ask you to give the rates on cattle, hogs and sheep between the same South Dakota cities and St. Paul and Minneapolis, Minnesota.

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The rate from Mitchell to St. Paul—distance, 418.5 miles; cattle, 25 cents per 100 pounds; hogs, 30 cents; sheep, 27½ cents.

From Chamberlain to St. Paul—distance, 485 miles; rate on cattle, per 100 pounds 30 cents; hogs, 35 cents; sheep 2½ cents.

From Aberdeen to St. Paul—distance, 287.6 miles; cattle, 24 cents; hogs, 27½ cents; sheep, 27½ cents.

Sioux Falls to St. Paul—distance, 239.6 miles; cattle, 20 cents per 100 pounds; hogs, 20 cents; sheep, 20 cents.

From Yankton to St. Paul—distance, 410.9 miles; cattle, per 100 pounds, 25 cents; hogs, 27½ cents; sheep, 27½ cents.

Q. Have you the tariff of the complainant on hard and soft coal between South Dakota points and Chicago, Illinois? A. Yes, sir.

Q. I will ask you to give the rates on coal between the same South Dakota cities and Chicago, Illinois?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The rate on coal from Chicago to Mitchell, distance, 616 miles, per ton, hard coal, $3.35; soft coal, $3.45.

From Chicago to Chamberlain, distance, 683 miles, per ton hard coal, $3.95; soft coal, $3.95.

From Chicago to Aberdeen, distance, 744.3 miles; coal, per ton, hard, $3.25; soft, $3.50.

From Chicago to Sioux Falls, distance, 595.8 miles, per ton, hard coal, $2.50; soft coal, $2.66.

From Chicago to Yankton, distance, 578.5 miles, per ton, hard coal, $3; soft, $3.30.

Q. Have you a tariff on coal between the same South Dakota points and St. Paul and Minneapolis? A. I do not seem to have it here at present.

Q. Mr. Sawyer, did you receive from the complainant the train reports of the conductors of passenger business upon the James River Division during the months of January and February, 1897? A. I received from the company the conductors' trip reports of business done each trip on the

James River Division, for the months of January and February, 1897—passenger business.

Q. Does that show the number of passengers carried? A. It does.

Q. And have you computed the number of passengers carried on that division during those months as shown in the reports? A. I have. Do you want each month separately?

Q. Yes; what is the total? A. The total number carried for the month of January of paying passengers, 3,233. Total number of paying passengers as shown on the report for the month of February, 2,247. Total for the month of January and February, 1897, 5,480.

Q. How many non-paying passengers were carried in the month of January? A. There were carried passengers, riding on passes, 210 in the month of January, 1897; there were carried passengers riding on passes in the month of February, 1898, 121.

Q. What is the total? A. The total number of passengers carried on passes for the months of January and February, 1897, 341.

Q. What is the total of all passengers carried? A. 5,480.

Cross-Examination by Mr. Kittredge.

Q. The populist legislation was in session in January and February, 1897, was it not? A. Yes, sir.

Q. All the figures you have given relate to inter-state business, do they not? A. To what figures do you refer —these rates?

Q. Yes, sir. A. Yes, sir.

Q. None of the figures you have given refer to purely local or South Dakota business? A. No, sir.

Witness excused.

And thereupon the taking of testimony in said cause is continued until 2 o'clock p. m. of this day.

April 30, 1898, 2 p. m.

H. W. SAWYER, recalled for further examination by Mr. Null:

Q. Counsel asked you if the legislature was not in session in South Dakota during the months of January and February. I will ask you if the names of the persons riding upon passes was disclosed by the conductors' reports from which you made your conclusions? A. Yes, sir.

Q. And were you acquainted with most of the individuals whose names appear there as having rode on passes? A. A good many of them.

Q. I will ask you if any of them were employes of the railway company?

Mr. Kittredge: That is objected to as incompetent, immaterial and not the best evidence. The records of the company is the best evidence, or better evidence than the testimony of this witness.

A. Well, I could not say about that. A great many of them were not. There possibly might have been some of them that were. I should think a large percentage of them were not.

Cross-examination waived.

W. T. LA FOLLETTE, being called as a witness on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. What official position do you hold in the State of South Dakota? A. I am one of the Railroad Commissioners of the state.

Q. For how long have you been a commissioner? A. Since January 7, 1897.

Q. I will ask you if you are acquainted with the line of railway recently constructed by the Chicago, Milwaukee and St. Paul Railway Company, from Star Lake, Wisconsin? A. I have been over said line of road.

Q. About how many miles have they that you refer to? A. About 19.7 miles.

Q. When were you over that line? A. In the early part of February—about February the 8th.

Q. Of what year? A. 1898.

Q. You may state the general features of that line of road, and the country through which it runs.

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. The road passes through a timbered district, and the surface of the country is rolling—sharp knolls and deep depressions. The soil is of a sandy nature.

Mr. Null: Did you notice the character of the rails with which it is laid?

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. Why, I should say that they were fifty-six to sixty pound rails. They are lightest rails—what I term fifty-six to sixty pound rails, as we find them in this state. They are not heavy rails. The timber through there is quite thick and heavy; that is, not large timber, but it completely covers the surface of the country all along the line of the road.

Q. Do you know what it cost to clear off the right of way for a mile of that kind of timber?

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. From the best information I could get it costs from $300 to $400 per mile.

Mr. Null: Are you familiar with the lines of the Chicago, Milwaukee and St. Paul Railway Company in the State of South Dakota? A. In a general way I am familiar with them.

Q. And have you paid special attention to these lines since this litigation has come up? A. Yes, sir; I have.

Q. Have you inspected different features of the road as you traveled around over the state? A. I have; especially in the past two months.

Q. I will ask you what you have found with regard to the stock yards? A. Well, I have examined the stock yards at some eight or ten different stations within the state. I found some of them in very good repair. The fences occasionally seemed to be somewhat dilapidated. The stock yards varied in size from 100 feet square, perhaps, to 200 feet square; and I paid some attention to the filling or paving of the yards that I looked at, and, with two or three exceptions, I found no planking in them, and in those two

or three I found perhaps one pen of twenty or twenty-five feet square that would have a good floor in it. I think at Lesterville, perhaps one-half of that yard was floored on the earth.

Q. Did you find any of the yards that were paved? A. No, sir.

Q. I will ask you if in your travels over the lines of this company in South Dakota you observed the number of ties to the rail at different points in the state? A. I have.

Q. What is the result of your investigation? A. I have counted the ties under rails at perhaps twelve or fifteen stations, or near them, and I found the ties varied from fourteen, fifteen, sixteen and seventeen, and occasionally as low as thirteen, so that I should say that the average rail, I think, would have fifteen to fifteen and a half ties to the rail.

Q. What did you discover with reference to the character of the ties—what kind of wood are they? A. They are usually soft wood—that is, at some of the stations I found oak near the depots, and at others they were cedar, I take it, and some hemlock, as near as I could judge.

Q. Have you been in Minneapolis recently? A. I was in Minneapolis in February of this year, 1898.

Q. Did you make the acquaintance of a man who dealt in ties and lumber there? A. Yes, sir.

Q. Did you investigate the market there as to the market price of ties such as have been used in South Dakota? A. I did.

Q. I will ask you to state what the market price was in Mineneapolis, as you found it upon that investigation?

Mr. Kittredge: That is objected to as incompetent and immaterial—not the best evidence and hearsay.

A. I inquired of Mr. Cooledge, of the firm of Cooledge Fuel Company, as to the cost of ties. He stated that the oak ties on board cars were worth from forty-eight to fifty-two cents apiece; standard cedar ties from thirty-five to thirty-six cents; pine and hemlock from twenty-six to twenty-seven cents; cull ties that were accepted, about fifty per cent. off.

Q. What business was that firm engaged in? A. Fuel, railway supplies, that is, timbers, especially ties, they said.

Q. Did you have any conversation with these dealers as to how many ties constitutes a car-load? A. Not with this firm that I have just mentioned.

Q. When you say they quoted prices on board cars, at what point on board cars? A. At Minneapolis.

Q. What further investigation did you make? A. I also visited the firm of Bradley & Watkins, dealers in lumbers, ties, etc., and had a conversation with Mr. Watkins. I disremember his initials; one of the firm he said he was.

Q. What did you discover there with reference to the market price of ties?

Mr. Kittredge: That is objected to as incompetent and immaterial, not the best evidence, and hearsay.

A. He informed me that oak ties on board cars were worth 52 to 53 cents; that he had supplied the Milwaukee road with a great many thousand ties on their South Dakota line; that cedar ties on board cars were worth 35 to 37 cents in Minneapolis, and that he shipped his ties from Michigan, and he said that he had recently received several cars, and produced the way-bills or bills of lading, whatever they may be termed, giving the weights of cars and the number of ties per car, and he figured up in my presence, I looking at him, two different cars, one of which contained

239 ties, and the other car 247 ties. That from the weight, one car averaged, the weight of ties, 151 pounds and a fraction, and the other car 160 pounds and a fraction. That ties with a six-inch face were worth 36 cents, cedar ties. That the roads used few oak ties,—those usually at the curves and switches, and that he was satisfied that cedar ties would last as long or longer than oak ties, and cull ties that were accepted by the railroad companies were sold at about 50 per cent. off from the standard price—the price of standard ties.

Q. In your observations did you notice the date of the brand on the rails on the lines of the Chicago, Milwaukee and St. Paul Railway in the State of South Dakota? A. I have in several instances.

Q. What was the result of your investigation in that direction?

Mr. Kittredge: That is objected to as incompetent and immaterial.

A. I examined the dates upon the railroad rails at the City of Mitchell about one-quarter of a mile west of the station house, and on the main line the dates were 1878 and 1879 on those I examined. On the Aberdeen line at the same point, there being two tracks running parallel there, the dates are 1881, 1882 and 1885. I also examined them at Mt. Vernon on the I. & D. Division, and found the dates there 1881 and 1882. At White Lake on the main line the dates were 1878 and 1879. On the side-track, 1877 and 1878. At Scotland, the rails on the main track were dated 1881 and 1883. I examined them at Vilas, on the Southern Minnesota road. The rails on the main track were dated 1883 and on the side-track 1879. At Roswell, in the same line, the date on the rails on the main track was 1883. I did not

examine the tracks at that point. I have examined rails at other points on the line dated 1880, 1879, 1877. In one instance, in the Mitchell yard, 1869.

Q. I will ask you if you recollect an examination of rails in the track of the Chicago, Milwaukee and St. Paul Railway Company inside of the city limits in the City of Madison, Wisconsin? A. I do.

Q. I will ask you to state the date of the rail that you found there?

Mr. Kittridge: I object to that as incompetent and immaterial.

A. 1877 and 1873, I think.

Mr. Null: Where was that rail located with reference to being in the main track or side track? A. It was in the main track near the East Milwaukee depot, I think it is called.

Q. What was the condition of the rail so far as you could observe it? A. They were in very good condition, those rails; they were not battered up on the surface, at least.

Q. The face of them were smooth? A. The face was smooth.

Q. Have you investigated the matter of depot platforms in South Dakota upon the lines of the Chicago, Milwaukee and St. Paul Railway Company? A. I have at several stations, yes, sir.

Q. State the result of your investigation in that direction? A. I measured the depot platform at the standard station, or rather standard depot at Kimball on the I. & D. line. I found the main platform to be ten feet wide and ninety-eight feet long, and an extension platform eight feet by eighty-two feet—the extension that run out away from

the main platform. I examined them at Pukwana and found a plank platform ten by one hundred feet, and an extension platform eight by sixty-five feet. At Plankinton, ten by one hundred feet, and an extension platform covered with cinders, twelve by one hundred and forty feet. At White Lake the platform was ten by one hundred feet; the main platform, extension, eight by sixty feet. At Mt. Vernon the platform was twelve by one hundred feet along the main track and a cinder extension of sixty feet. This depot and platform has been rebuilt since the station was located there. It burned down. At Bridgewater I examined the platform along the main track in front of the depot, ten by one hundred feet, and an extension eight by fifty feet. At Parker the platform was ten by one hundred feet in front of the depot and an extension of twelve by seventy feet. At Chancellor the platform was a cinder platform ten by thirty feet.

Q. Did you make an investigation as to the number of cattle guards in the track on the complainant's lines of railway in the State of South Dakota? A. I have on a part of their line.

Q. You may state the result of your investigation in that direction? A. I have counted the cattle guards on the main line from Canton to Chamberlain. I found thirty-eight. I counted them from Marion Junction to Running Water, on the Running Water branch, and found forty. I counted them from Sioux Falls to the Sioux River bridge near Sioux City on the Dakota side. I found fifty-nine. I counted them on the Sioux City and Dakota division from Elkpoint to Mitchell, and found fifty-four. I passed over the Southern Minnesota Division from Vilas to Woonsocket, a distance of thirty-four miles, and found no cattle guards. I

passed over the Jim River line to Mitchell, fifty-four miles, and found no cattle guards. The total number of miles travelled on the road in this work was 492. Total number of cattle guards found by me was 191. These examinations were made between February 8th and April 16th, 1898.

Q. In traveling over the lines of road in this state, did you observe the character of the highway crossings? A. To some extent, I did.

Q. How are they constructed; that is, what is there to them? A. There is usually one plank laid on the outside of the rails on each side and two or three planks or a sufficient number to cover the track between the rails.

Q. Is the track always covered clear across the track between the rails? A. Not always, but usually.

Q. Did you discover any timbers or anything under those crossings other than ties, or was the plank nailed on the ties? A. Well, my examination was made when traveling on the train usually, and I had not time to see what was under the plank.

Q. Have you observed the condition of the buildings generally on the complainant's line of railway in South Dakota with reference to their being in repair? A. I have over the lines that I have passed over during the last two months.

Q. What condition did you find them in? A. There was generally very little new improvements, except in platforms. I only noticed one depot and that at Artesian on the Southern Minnesota Division that had recently been painted.

Q. What is the condition of the depot buildings generally with reference to their being painted? A. They are generally needing paint in order to preserve them well.

Q. Would you say they had been painted in the last five years? A. To the best of my judgment, they have not, generally.

Q. I will ask you if since this litigation arose you requested the complainants to furnish or file with the commissioners a profile of their lines in South Dakota from which the quantity of earth work could be determined? A. We have.

Q. And when was that request made? A. Some time in the month of December, 1897.

Q. Has that request been complied with? A. It has not; the request was also made verbally by myself at Chicago to Mr. Kittredge, attorney for the complainant company, two or three different times in February, March and April, and I was always informed that it was being prepared in the engineer's office, and usually that we could have it in about two weeks.

Q. I will ask you, if you, by written notice or by oral conversation, informed the complainant, or any of its attorneys or officers, the object or purpose for which this profile was wanted? A. I attempted to do so, and I supposed I had informed them clearly what was wanted, stating to them that we desired profiles showing the removal of earth and grades of the road.

Cross-Examination by Mr. Kittredge.

Q. You stated that in December you asked the complainant company to furnish you certain information regarding the profile of its line of road in South Dakota? A. Yes, sir.

Q. That was in writing, was it? A. Yes, sir.

Q. And it bears date December 27, 1897? A. Yes, sir.

Q. And it reads as follows: "Profile of roads in South Dakota and established grade line," that was the request that you made of the complainant? A. Yes, sir.

Q. Now, in the subsequent talk that you had with any of the officers of the company or its attorneys, did you say anything of this request, except to refer to it as the profiles? A. Oh, yes; I asked you if those profiles were ready—that we needed them for our use in the trial of this case.

Q. They were always referred to as "profiles"? A. I have not finished my answer; that we desired to ascertain the grade of the road, removal of dirt, etc.

Q. Of whom did you make that request, Mr. LaFollette? A. I think Mr. Kittredge.

Q. What is that? A. I think Mr. A. B. Kittredge.

Q. Did you ever make any statement to anyone of the purpose that you wanted it for? A. I think so.

Q. Where was it made? A. In the room in the City of Chicago where this case was being tried.

Q. Did you make the request of anybody else of the Chicago, Milwaukee and St. Paul Company or did you state to any officer of the company or any of its attorneys the purpose for which you wished these profiles? A. I think I made myself clear on that proposition?

Q. You are not sure about that? A. Well, it seems not, from the character of the profiles that have been sent here.

Q. And you say that the only talk that was ever had with me upon the subject referred to the purpose as well for which these profiles was to be used by you? A. Yes; I think so.

Q. You are not positive about that? A. The only talk you say?

Q. Yes. A. No; I think Mr. Peck was present at some of those talks, when they were made at Chicago.

Q. Then Mr. Peck was present? A. Yes, sir.

Q. When you stated the purpose for which you desired these profiles, you stated them at those times, did you? A. Well, I would not be sure; there has been several talks that I have had and Mr. Null had with the attorneys there, during the trial of that case. Several times the profiles have been asked for during the winter.

Q. They have always been referred to as the profiles, have they not? A. I think probably they have, "profiles," as a rule.

Q. You don't want to say, Mr. LaFollette, that at each talk you had about these profiles, you stated the purpose for which you wanted them? A. No; not at each time.

Q. You don't want to say that at any time? A. I want to say I think I made myself clear to you the last time I talked to you about it.

Q. Do you want to say that you have asked Mr. Peck, or any of the officers of the Chicago, Milwaukee and St. Paul Railway Company, or myself, for profiles, stating the purpose for which you desired them, on any occasion? A. I did; yes, sir. I do want to be understood as having been understood.

Q. Now, give us the dates and places, so that we can lay a foundation for a contradiction? A. If you will permit me to refer to the adjournment of the case the last time in Chicago.

Q. Well, the last was April 4th. A. And that date was the last date I talked to you.

Q. And that was in the office of the Chicago, St. Paul

and Milwaukee Railway Company? A. It was in the room where we had been holding the hearing, I think.

Q. Was that the meeting room? A. I think so.

Q. Don't you know, Mr. LaFollette, the last session we had in Chicago, was not held in the meeting room at all, but in Mr. Field's office? A. I do know it.

Q. So you are mistaken about that? A. I am mistaken about the room, yes, sir.

Q. Did you state to Mr. Peck the purpose for which you desired these profiles? A. I did not talk to Mr. Peck at that time about it.

Q. Did you at any time? A. I did talk with him at the other times we were there.

Q. Stating to him the purpose for which these profiles were desired? A. I think I made myself clear; I tried to.

Q. What did you say to him, so that somebody else can see whether you made it clear or not? A. Well, I will not say that; I can't quote the exact words I said to him.

Q. Well, state as near as you can. A. I think I asked him in substance this: "Are those profiles ready yet, for the lines in South Dakota, that we called for in December?" He said they were not, that they were being made, that they were putting the figures on, all the figures that were necessary, and that it would be some little time before it could be completed, two or three weeks, perhaps, but they would be out just as soon as they could get them completed. That, in substance, is what he said to me in reply

Q. And that is substantially all that was said between you and he on that subject at any time? A. I had other conversations with him about it.

Q. To the same effect? A. Yes, sir; along the same line

Q. But substantially as you have stated? A. Substantially as I have stated.

Q. In any conversation you had with Mr. Peck, you never did mention the purpose for which you desired these profiles, did you, according to your own statement? A. I don't know as I did, to Mr. Peck.

Q. Let me ask you if in this written resolution which you gave to the company you asked for the profile of the roads in South Dakota and established grade lines? A. Yes, sir.

Q. Have not you got them—don't you understand you got just what you asked for in the resolution? A. I do not, and I desire to say to you that that same resolution covered all other roads running into this state, and the same notice was served upon the officers of the different roads, and some of them have complied and supplied us with exactly what we desired.

Q. And they clearly comprehended what you wanted? A. Yes, sir.

Q. Why didn't you put in this resolution the purpose for which you desired them, as well as to state that? A. We supposed that resolution was sufficiently plain to have the officers of any company that was familiar with the terms used by the company for grade work to know what we wanted them for. We were not familiar with the technical terms used by civil engineers.

Q. Tell me why you used this expression in your written resolution: "Profile of roads in South Dakota, and established grade line"—not stating the purpose or saying to me or any officer of the company, complainant, what the purpose was for which you desired them? A. Well, I don't know; we supposed when that resolution was passed that what we desired would be forthcoming at once.

Q. Is not it a fact, Mr. La Follette, that in the conversation you had with Mr. Peck, and with myself, about these profiles, they were spoken of as profiles, and nothing else? A. I think I always called them profiles.

Q. Certainly you did. A. And I stated to you that we needed them to use in this case.

Q. Did you state anything more? A. Yes, sir; I am certain that I did.

Q. Just where did you make that statement? A. The last time you and I had a conversation in Chicago.

Q. And you are mistaken about the place where it occurred? A. I was not positive where the location was.

Q. That was the only time you told me the purpose for which you desired them? A. Yes, sir; I think it was.

Q. Now, where did you say that conversation occurred? A. It was in that building, and it must have been in the room you say was Mr. Field's or Mr. Hanson's room.

Q. That was the only occasion in which you stated to me the purpose for which you desired these profiles? A. I think so.

Q. So that we have limited it now down to that one occasion? A. Yes, sir.

Q. And you are not able to state the place? A. Not positively.

Q. Was anybody present? A. I do not think so; I think nearly everyone had left the room at that time.

Q. And no officer of the company or anyone acting for the complainant, except myself, was present; did you state the purpose for which you desired these profiles? A. No, I do not know—

Q. But you directed your request to me? A. You seemed to have charge of the conduct of those matters, and furnished us with the different data that we asked for from the different offices during the examination that was going on there. They seemed to be referred to you at all times—matters of that kind.

Q. I will ask you whether you stated the purpose to anybody else except myself? A. I told you I did not think I did.

Q. Have you ever had any experience in railroading? A. No, sir,

Q. Of any character? A. No, sir.

Q. Did you ever have any experience in clearing the way of trees for the purpose of laying railroad track? A. Not for that purpose.

Q. Did you ever work at that business? A. Yes, sir.

Q. I mean for the purpose of building a railroad? A. No, sir.

Q. How are you able to state, or do you state from your own knowledge, that it costs from $300 to $400 per acre to clear this Wisconsin line, for the purpose of building this line of road? A. No, sir.

Q. Is that your statement? A. My statement was not that I knew that; it cost that; it is not in the record that way; it does not read that way.

Q. What was your statement? A. Mr. Null wanted to know the best information that I had.

Q. Where did you get that information? A. I secured it from the testimony taken in a Minnesota railway case.

Q. You read it somewheres, did you? A. Yes, sir; in the testimony furnished to us.

Q. You have no knowledge yourself? A. I did not claim to have personal knowledge.

Q. The only information you had was what someone else told you, or what you read? A. From the testimony taken in the Minnesota trial.

Q. How many stock yards did you examine, and where were they? A. At Vermilion, South Dakota, Lesterville, Scotland, Tripp, Parkston, Ethan, Mitchell, Plankinton, White Lake and Chamberlain.

Q. Have you at any time examined any of the stock yards on the line of the complainant's road in South Dakota? A. As the train passed through, I have stepped out and if I had time to go to them or to get on the platform, where I could look at them, I would cast my eye over them along the track.

Q. Did you make any real inspection of them? A. No, sir; not to go inside of the yards.

Q. You have seen the stock yards as you passed along on the passenger train, and stepped out on the platform? A. Yes, sir; just to look in and examine the ground.

Q. There is a stock yard at every station of the Chicago, Milwaukee and St. Paul Railway Company in South Dakota, is there not? A. There is not at Vilas; I noted that down distinctly.

Q. As a rule, there is a stock yard at each station? A. Yes.

Q. And you examined how many—eight or ten? A. Eight or ten.

Q. In what manner did you make this inspection—did you stop over a day at each of these stations? A. No, sir; on the line from Mitchell to Chamberlain, we had an ac-

commodation train that stops from fifteen to twenty minutes at each station.

Q. And you made your inspection while it was stopped? A. Yes, sir.

Q. How did you make your examination at Ethan station? A. By looking at the yard from the platform of the car.

Q. You did not go out to the stock yards? A. No, sir; it was right close to the track.

Q. How did you examine the stock yards at Parkston station? A. I was down there some time early in April, I think, or the last of March, and stopped over there between trains; went down from Mitchell and stopped there until the train came back from the south.

Q. How did you examine the Tripp stock yards? A. The train stops there something like four or five minutes, and I walked over there as near as I could—I went as far as I had time to.

Q. How did you examine the Scotland yard? A. The same way there.

Q. The Lesterville stock yards? A. I examined it from the platform of the train; I could see into the yard just as I can see into the street here.

Q. Were you riding on the passenger train on the line down from Mitchell to Chamberlain? A. Yes, sir.

Q. And you made the inspection during the stops at stations? A. Yes, sir.

Q. Did you make any further inspection of stock yards at Vermilion station? A. No, sir.

Q. Just in the same way you have indicated with the others? A. Yes, sir.

Q. So that the only stock yards you spent any time or made any stop at, was at the Parkston station; was that true? A. And the station from Mitchell to Chamberlain, as I have indicated.

Q. Have you ever dealt in ties? A. No, sir.

Q. Did you ever know anything about the cost of ties or the tie business, until you became a commissioner? A. No, sir.

Q. Did you ever investigate the subject until the first of February, 1898? A. As to the cost, do you mean?

Q. Yes, sir. A. No, sir.

Q. You have stated that you have made inquiries of two firms, as I recollect, in Minneapolis? A. Yes, sir.

Q. And have given in evidence here what the gentleman told you about them? A. Yes, sir.

Q. And that is all there is to that? A. Yes, sir.

Q. All you have testified to here is what they told you; is that right? A. Yes, sir.

Q. You made some examinations of rails? A. Yes, sir.

Q. At certain stations? A. Yes, sir.

Q. I think you mentioned Mitchell and Aberdeen line, and Mt. Vernon and White Lake, and Scotland and Vilas and Roswell and some others; that is all that I can remember; how did you make that inspection; did you stay over a day at those places? A. No, sir.

Q. Well, now, how did you do that—for instance, take the Scotland station? A. Stepped off while the train was stopped—five minutes perhaps it stopped there, and walked along the side of the track and read the numbers on the rails.

Q. Read the brand on the rails? A. Yes, sir; the brand and the date.

Q. How many rails did you have a chance to look at, during that time at the Scotland station? A. Two or three —three or four, perhaps, at some of the stations.

Q. I am speaking of the Scotland station? A. Yes; but at the Scotland station one was dated 1881 and the other 1883; I only looked at two at that station.

Q. There was no other rails you observed, or that you looked at? A. No; not at that station.

Q. Take the station at Roswell—how many rails did you look at at that station? A. Two or three.

Q. Well, don't you know whether it was two or three? A. I don't know as I could say, at that station, whether it was two or three, but I had two or three minutes, and I walked along the track a distance of three or four rails, and examined the dates on them.

Q. You saw no other rails? A. Along that line, as my testimony states, on the Southern Minnesota track, the rails were all dated 1883.

Q. You say two or three at that station? A. Yes, sir.

Q. You didn't examine any more at that station, did you? A. No, sir.

Q. Is that true at the Vilas station? A. At the Vilas station, I saw more of them.

Q. How many did you see at the Vilas station? A. I think five or six, or eight. I walked along far enough to satisfy myself, and the date of all of them on the main track was 1883.

Q. That is all that you saw? A. Yes, sir.

Q. How many did you see at the Vilas station? A. That is the one I just mentioned.

Q. You did not personally observe any others except the six or eight you have just mentioned? A. I observed one on the side-track there, which was dated 1879.

Q. Do you know how many rails there are in a mile of road? A. I have not testified anything about how many rails in a mile of road.

Q. I am just asking you if you know it? A. I do not.

Q. 176, is it not? A. I said I did not know.

Q. Well, now, how many rails did you examine at the Mount Vernon station? A. Two I have marked down here, one dated 1881 and another 1882.

Q. That is all you looked at at Mount Vernon station? A. That is all I have data for.

Q. Now, you made an examination, as I recollect it, at the west end of the Mitchell yards? A. Yes, sir; about a quarter of a mile.

Q. One on the I. & B. Division and the other on the Jim River line? A. Yes, sir.

Q. How many did you look at on the I. & B. line? A. Oh, I think three or four up there.

Q. And that is all? A. At that point.

Q. That is all at that point you have got data for? A. I looked at others in company with Mr. Null, at the station, but I went out from the station house a little at that time to see how they compared.

Q. How many did you look at on the Jim River line, as it is called? A. At that point?

Q. Yes. A. Two or three.

Q. Did you look at the rails at Kimball? A. I did not examine the rails at Kimball.

Q. Did you examine the rails at any other points, than those I have mentioned in cross-examination; if so, state what they were? A. I examined them at White Lake—I don't remember whether you have asked me about them or not.

Q. What did you find at White Lake? A. On the main track I found the dates 1878 and 1879; on the side-track, 1877 and 1878.

Q. How many did you observe there? A. I usually observe two or three and four rails at a station that way, sometimes I would look at more, but I found many times the dates the same all along, and I noted down what I found.

Q. You only examined two or three at White Lake station? A. Yes, sir; I think that was all—two or three.

Q. Is there any other station at which you made an examination of the rails, except as you have testified in cross-examination? A. Yes, sir; I have made an examination at other stations, but I have not the data, and only have in my mind an impression.

Q. Wait a minute. That impression, you know, that is not competent? A. The dates compared with these others that I put down.

Q. You have then testified in cross-examination regarding all the rails concerning which you have data; is that right? A. That is true.

Q. And if you made any other examination at any other points on the road, you did not preserve your discovery, and are unable to testify about it? A. Further than as I stated a moment ago, that the dates compared along with these I have the data for.

Q. You made some examinations about platforms—did you make examinations of any other platforms than those you have testified to in answer to Mr. Null's inquiries? A. Not to measure them; no, sir.

Q. In what manner did you make those measurements? A. At the Kimball station, which is a standard depot, I measured it with a tape line.

Q. Anyone help you? A. Yes, sir.

Q. Who was that? A. Mr. Kinsella, postmaster at Kimball.

Q. When was that measurement made? A. On the 16th day of February, 1898.

Q. Did you measure with a tape line these other stations you have described? A. I did not.

Q. In what manner did you take the measurements there, or upon what do you base your testimony? A. By stepping them off.

Q. Then all the stations concerning which you have testified about the platforms, except Kimball, you simply walked up and down the platform pacing it off? A. Pacing it off.

Q. And paced off all of the distances you have given except at the Kimball station? A. Yes, sir.

Re-direct Examination by Mr. Null.

Q. Mr. LaFollette, do you remember the occasion of a conversation you had with a section foreman on the Milwaukee line between Canton and Mitchell? A. Yes, sir.

Q. You may fix the time and place of that conversation? A. The place was the station of Bridgewater, and some time in the month of March.

Q. Can you fix the date? A. I cannot give the date; I was at Bridgewater February 16th, examining the platforms and depot and oil house and water closets, etc.—I do not think that was the date. I passed through there very frequently in March and the early part of April.

Q. Do you know the name of the party? A. I do not.

Q. Was he the section foreman on that section? A. He told me he was; that is all I know about it. I have not the record, and I could not tell.

Q. State the conversation?

Mr. Kittredge: Complainant objects to the question as incompetent, immaterial, hearsay, and not binding upon the complainant.

A. I was on the rear end of the train, watching the condition of the road, the appearance of the ties on the road, especially, with a view to seeing whether the ends of the ties were sawed off or whether they were chopped with an ax. I had a piece of paper in my hands and I was making little notes of things I observed, and I noticed a man standing and looking over my shoulder, and he carried a red flag in his hands. The train soon arrived at the station of Bridgewater, and I said to him: "Are you the section boss here," and he said he was; and he wanted to know if I was a railroad man; and I told him I was looking into railroad matters a little. I asked him how long those ties had been in the track along there, and he said: "There are some of the original ties in the track that was put in there when the road was built." I said to him: "How long will a cedar tie last in the track?" "Oh, from fifteen to twenty years," he said. About that time the train moved off, and that terminated the conversation.

Q. When you first noticed this gentleman he was on the train riding? A. Yes, sir.

Q. And when you arrived at the station he got off there? A. Yes, sir.

Re-cross Examination by Mr. Kittredge.

Q. Did you make a memorandum of the number of ties you observed were chipped or sawed as you rode on the rear end of the passenger train? A. Not hardly.

Q. Is that the way you counted the number of ties that were under each rail? A. Oh, no.

Q. How did you do that? A. By walking alongside of the track.

Q. Where did you make those examinations? A. At Parkston, Marion Junction, Kimball, Freeman, Mitchell, Vilas, Roswell and Artesian.

Q. How long did you remain at Artesian making this examination? A. Three or four minutes, perhaps, or five.

Q. How many rail lengths did you go over? A. Two or three at that point.

Q. How many rail lengths did you go over at Vilas? A. Four.

Q. How many rail lengths did you go over at Mitchell? A. Five.

Q. How many at Marion Junction? A. Five.

Q. At Freeman? A. Four.

Q. At Parkston? A. Four.

Q. At Kimball? A. Six.

Q. At Roswell? A. Three.

Q. Did you make any examinations at stations other

than those you have mentioned? A. I have, but I have not the data for them.

Q. So the only place that you made examinations of the number of ties under the rail was at the stations you have testified about? A. Yes, sir.

Q. Did you observe at these places the width of the face of the ties? A. In a general way I did.

Q. Did you notice whether they had a broad face or a narrow one? A. They varied from six inches, I should say, to ten.

Q. They may have been twelve inches, might they not? A. Possibly some of them.

Whereupon the further hearing was continued to Monday, May 2d, A. D. 1898, at the hour of 9:30 o'clock a. m. of said day.

May 2, 1898. 10 o'clock a. m.

N. O. WHITNEY, being called as a witness on behalf of the defendants, was by the special examiner duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Whereabouts do you reside? A. Madison, Wisconsin.

Q. What is your occupation at the present time? A. Professor of civil and railway engineering at the University of Wisconsin.

Q. When did you first engage in the business or profession of civil engineer? A. Just after graduating in 1878

from the civil engineering department of the University of Pennsylvania.

Q. What work did you engage in at first? A. Draftsman, in the office of the chief engineer of the Pennsylvania Railway at Philadelphia.

Q. Just give a short statement in your own language of the work that you have done from that time to the present in your profession? A. I was about six months in the chief engineer's office as draftsman and about a year on construction on the Pittsburg, Virginia and Charleston branch of the Pennsylvania Railway upon the Monongahela river; then locating engineer on the Mexican National Railway in Mexico, for nealy a year and a half; surveyed and located 300 miles of the Mexican National Railway, then for about four years locating engineer and resident engineer on construction on the South Pennsylvania Railway in Pennsylvania, where I located some forty miles of that line; then for about five years as assistant to the chief engineer of the Pennsylvania Company, with headquarters at Chicago, during which time I located and built three small lines of the Pennsylvania system in the neighborhood of Chicago—the South Chicago and Southern Railway, the Calumet river line and the State Line and Indiana City Railway; then from the fall of 1891 till the present I have held the chair of railroad engineering in the University of Wisconsin.

Q. Have you read the testimony of Mr. Whittemore, the chief engineer of the Chicago, Milwaukee and St. Paul Railway Company? A. Yes, sir.

Q. In this case? A. Yes, sir.

Q. And have you examined his estimate of the cost of the Chicago, Milwaukee and St. Paul's lines in South Dakota, known as Exhibit 25? A. Yes, sir.

Q. Are you familiar with the lines of the complainant in South Dakota? A. Only a portion of them.

Q. What part of the complainant's lines in South Dakota have you been over recently? A. The line from here to Canton, from Canton to Mitchell, Mitchell to Aberdeen, Aberdeen to Elk Point, Elk Point to Sioux Falls.

Q. Have you examined Mr. Whittemore's estimate of the cubic yards of earth work on the South Dakota lines? A. I have made a rough estimate; yes.

Q. Have you examined the profiles of the complainant's lines of railway in South Dakota as furnished the commissioners on Saturday last? A. Yes, sir.

Q. Are you able, from the examination that you have made of the profiles and from your inspection of the road, to make an estimate of the yards of earth work so as to determine whether Mr. Whittemore's estimate is correct or not? A. Well, the profiles are not construction profiles, so there is no information pertaining to that on the profiles, and as far as the inspection is concerned of course I have a general opinion of the cost of those lines I have been over—but not an estimate—not an accurate estimate.

Q. That would be simply your opinion from a casual inspection of the roadway? A. Yes, sir.

Q. You have not had any data or facilities for testing the estimate of bridge timber? A. No, sir.

Q. Or the feet of piles in the bridges? A. No, sir.

Q. I call your attention to the item of 106,300 tons of rails, and upon the theory that that was composed of rails weighing fifty-six pounds to the yard, have you computed the amount that would be necessary to lay the lines in South Dakota? A. That is correct, I believe.

Q. Mr. Whittemore's estimate of the tons of rails you think is correct? A. Yes, sir.

Q. Have you investigated the subject of the number of cross ties to the mile? A. Yes, sir.

Q. How have you obtained your data for that computation? A. The result of the inspection I made of the line; and I differ in the total amount of cross ties on the South Dakota lines from this quantity, 3,562,000, which is based on 3,000 ties to the mile. My observation indicates pretty clearly that about 2,816 ties—sixteen ties to the thirty-foot rail—is the condition of the track.

Q. Did you make an examination of the lines that you passed over with a view to determining the number of ties to the rail? A. Yes, sir; that among other things.

Q. And at how many different points did you investigate that question? A. At about every station at which the train stopped on the divisions that I have mentioned and in the neighborhood of Sioux Falls here.

Q. The reduction of the number of ties would reduce—would make a corresponding reduction in the amount of track spikes used, would it not? A. Yes, sir; but I have made no estimate of that item.

Q. I call your attention to the item of $450 a mile for track laid and surfacing, and ask if you are familiar with the cost of such work ordinarily? A. Yes, sir.

Q. I will ask what in your opinion is a fair value to place on that service or labor? A. The estimate which I have made for that item places the cost at $240 per mile, instead of $450, based on the cost of that work in the Pattersonville extension, as submitted by the company.

Q. You have examined this statement of the cost of con-

structing this Pattersonville extension, have you? A. Yes, sir.

Q. And you found from your examination that the charge has been $240 per mile east to Mitchell? A. Yes, sir. Portions were put down at $240 per mile and portions at $210. I took the $240 for track laying and surfacing.

Q. And from your knowledge and experience in railway work, would you say $240 was a reasonable allowance for that work? A. Yes, sir.

Q. Assuming that the freight charge on the Pattersonville extension account for the construction of 246 miles of road, amounting to $398,492.54, which includes all freight upon material, such as the charges for moving material to the front, freight on contractor's material, freight on bridge and culvert material, the contractor's tools and the contractors' teams and the transportation of men, how much would that amount to per mile? A. A little over $1,600 per mile.

Q. Assuming that that freight was charged upon the basis of a cent per ton per mile, what would it amount to if charged on the basis of ¾ of a cent per ton per mile? A Three-quarters of that, or $1,200 per mile.

Q. And what would it amount to upon the basis of 6-10th of a cent per ton per mile? A. $960 a mile.

Q. Upon the basis of ¾ of a cent per ton per mile, what would be the freight charge for material for 1,187.21 miles? A. $1,324,640.

Q. And what would it amount to upon the basis of 6-10 cent per ton per mile? A. $1,139,720.

Q. How many ties would it take to lay 246 miles of railroad upon the basis of sixteen ties to a thirty-foot rail? A. 692,736 ties.

Q. Assuming, then, that the freight upon ties for the Pattersonville extension account amounted to $193,222.07, what would be the freight per tie? A. 27.8 cents per tie.

Q. Assuming that that is upon the basis of 1 cent per ton per mile, what would be the freight upon ties upon the basis of ¾ of a cent per ton per mile? A. A little less than 21 cents per tie.

Q. Practically 21 cents? A. Yes, sir.

Q. I call your attention to an item on page 324 which reads "add interest on the cost as above given for one-half the time during which the line was under construction one year six per cent.," and ask you what the condition would have to be to justify such a charge? A. That a great deal of the material for the construction of the road should lie idle for nearly a year and the grading cost of the stations also and the stations all being built and not occupied for about a year, that no returns or receipts of the road during the year after the construction of the road.

Q. I will ask you if that would be an economical method of constructing 1,100 miles of railroad? A. I think not.

Q. And would those items be a proper charge where the traffic, comparatively speaking, follows the laying of the rails? A. Not after operations began. Of course the receipts would pay the interest on the investment, and it would not be a proper charge on the construction of the road.

Q. I call your attention to the item for betterment of road-bed and bridges estimated at five per cent. of the above. I will ask you if in your inspection of the lines in South Dakota, you found any extensive bridges or embankments that have required any considerable strengthening or improvements since the original construction? A. Yes; the bridges are being renewed at quite a number of places, and

the embankments in some few places, and in some places the road-bed is being ballasted. I presume that it is not intended to be included in this, however, but apart from that I did not see very much.

Q. Of the total cost of construction of bridges and culverts, amounting to about $500,000, would a charge of $854,000 for betterment to bridges since construction be a reasonable charge? A. As to that, I would not like to answer, not having sufficient data.

Q. I now call your attention to the testimony of Mr. Earling and ask you if you have read his testimony with reference to Exhibit 23 on page 300 of the record? A. Yes, sir.

Q. I call your attention to the item on page 302—"Renewal of rails." I will ask you to state if you have examined the character of the rails at or in the line of the complainant over which you have passed? A. Yes, sir.

Q. And what have you found—what kind of rails are in use? A. Well, I found the brand at the various stations and in the neighborhood of Sioux Falls here, and found the steel varied from the year 1875 to a small piece of 1892 date.

Q. Was it all steel rails? A. Steel rails I refer to.

Q. And what weight rail did you find—that is, what is supposed to be its weight now? A. Some fifty-six pounds and some sixty, as I understand.

Q. At how many different points did you inspect the rails? A. About all of the stations I passed over on the trip I described.

Q. Have you in your professional experience investigated the subject of the durability or life of a sixty-pound steel rail or a fifty-pound steel rail? A. Yes, sir; I have

studied the question, as all civil engineers—railway engineers—have.

Q. And did you make it a point to observe the performance of rails? A. Yes, sir. I observed the life of rails on the Pennsylvania road from time to time.

Q. What is the best known method of calculating the life of a rail according to your experience and the recognized authorities in your profession? A. I think it is generally conceded that the tonnage passed over the rail modified by curves and grade form the best data for judgment on the question.

Q. How many tons is a fifty-six pound rail supposed to carry on a straight level track? A. It is pretty well agreed among engineers that from 150,000,000 to 250,000,000 tons.

Q. Is it also stated that the number of trains passing over it is a method of determining the life of a rail? A. Yes, sir; from 200 to 300 thousand trains.

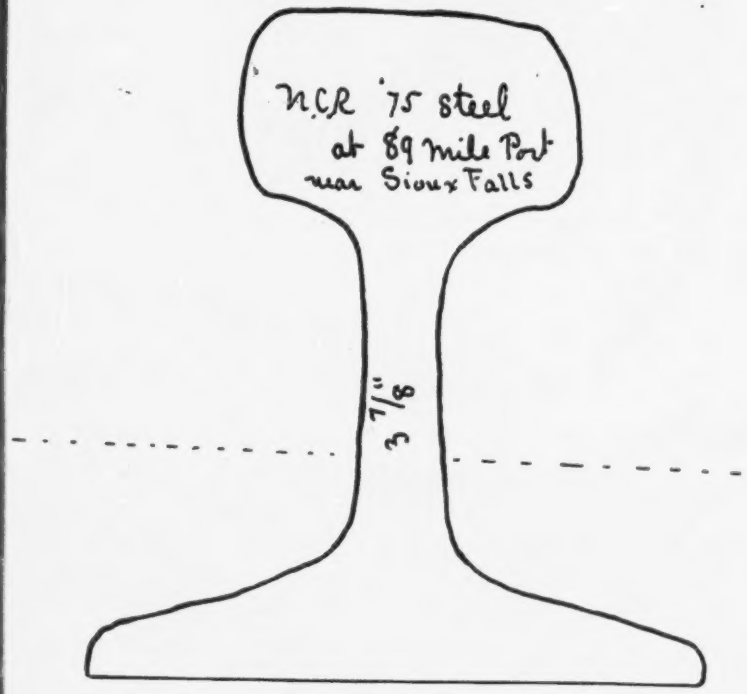
Q. Have you taken impressions of sections of rail found on the lines in South Dakota? A. Yes, sir; I have taken some.

Q. I will ask you to produce them?

(Witness produces papers.)

A. I have an impression of the North Chicago rolling steel of the year 1875, taken at the eighty-nine mile post down here below the City of Sioux Falls, with a number of impressions of the head of the rail. The same date and impression of the relaying—relayers that are delivered along this portion of the line about to be renewed. I should say that that relayer I show in this impression is North Chicago rolling mill steel, brand '83, twenty-eight feet long; the other impression I have is at Hill Siding, delivered for relaying,

DEFENDANTS' EXHIBIT 70.



'81 steel, marked U. I. S.—I presume, Union Iron and Steel Company. And an imprint of some steel for relayers on board cars standing at Mitchell, when I passed through there on the 29th of April—date of brand of North Chicago Rolling Mill Company, 1880. I had one or two others that I took on newspapers.

Defendants' Exhibit 70 marked by the special examiner for identification.

Q. The impression upon Exhibit 70, you say, is steel that was dated 1875? A. Yes, sir.

Q. And where did you find that rail? A. At the eighty-nine mile post below Sioux Falls.

Q. About how far is it below Sioux Falls? A. About a mile.

Q. And was the rail in the track? A. That rail was not.

Q. Where was it? A. On the support post; it was an extra rail.

Q. It was a rail on the post by the side of the track for repairs? A. Yes, sir.

Q. I will ask you to state the condition of that rail with reference to its having been worn and the probable amount of wear it will yet stand? A. It had been used before—the marks of the sixteen ties on which it had been laid showed plainly. Judging by the general appearance of the rail head, it had a number of years of life left. It is impossible to tell how much it had worn. The surface was in good shape.

Q. Taking the head of the pattern disclosed by this impression, Exhibit No. 70, and how much of the head of the rail can be worn away before the rail is said to be worn out?

A. Well, I cannot say as to this particular rail. From three-eighths to five-eighths inches is the amount of possible wear, in the rail ordinarily, for a fairly good track.

Q. That would be that the height of the rail would be reduced that much? A. Yes, sir.

Q. How much would that reduce the weight of the rail? A. Ten to fifteen pounds a yard.

Q. That is, a sixty pound rail might be reduced to a fifty pound rail by wear? A. Yes, sir. It depends, of course, somewhat on the width of the head.

Defendants' Exhibit 71 marked for identification by special examiner.

Q. I now call your attention to the imprint of the section of rail on Exhibit 71, and ask you where you found the rail from which that imprint was taken? A. This was lying alongside of the track, delivered for relaying, about in the same place—eighty-nine mile post.

Q. What was the date upon that rail? A. Upon this was the North Chicago Rolling Mill Steel, 1883.

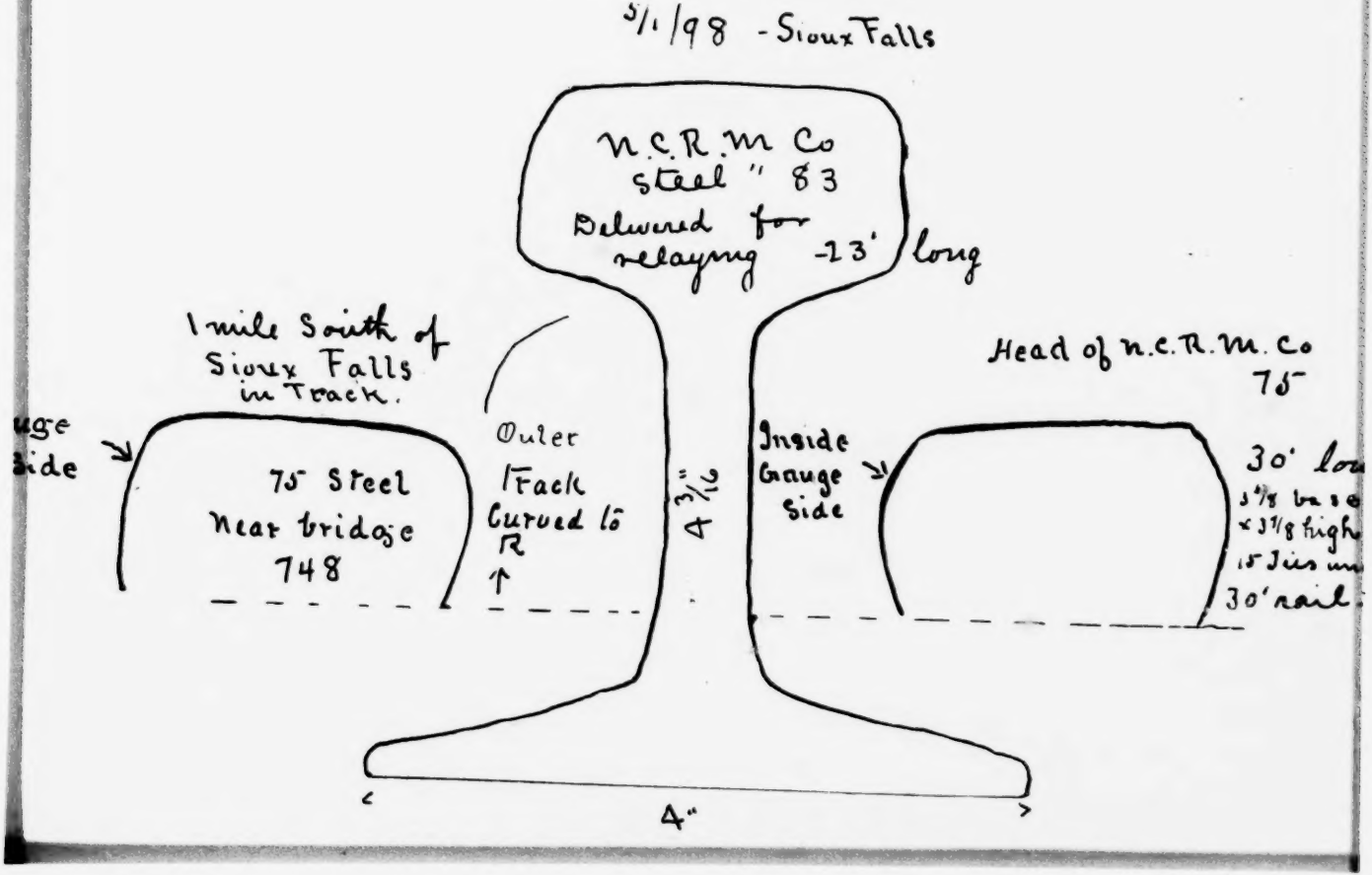
Q. I will ask you if that rail had the appearance of having been used heretofore? A. Oh, yes; it had been used, and a foot sawed off each end—twenty-eight feet long—repunched.

Q. Had these rails or any other relaying steel that you discovered been re-rolled? A. No; sawed off. I saw no rails that had been re-rolled.

Q. Rails wear faster laid on curves or on grades, do they? A. Yes, sir.

Q. I will ask you to state the result of your experience and investigation in that respect, as to the tonnage that a rail is supposed to carry laying in a track with 3 per cent. curvature? A. Three degrees curvature?

DEFENDANTS' EXHIBIT 71.



Q. Three degrees curvature, I should say. A. Well, I would have to speak very generally. The tonnage would be very much reduced.

Q. So that placing the rail in the curve the degree of curvature would be an important factor? A. Yes, sir.

Q. And the greater the curve the shorter the life of the rail? A. Yes, sir. The sharper the curve the shorter the life.

Q. What is recognized as a standard authority upon this subject by your profession—what work, if any? A. Well, there are numerous writers on this subject. I think A. M. Wellington, the former editor of the Engineering News, has investigated the subject pretty thoroughly, and is well posted and speaks with authority.

Q. Have you a copy of his work with you? A. I have.

Q. I will ask you to turn to the portion of the book on which the subject of the life of a rail as measured by the tonnage or the number of trains is mentioned. Do you find it? A. Yes, sir.

Q. Upon what page? A. 119.

Q. Read briefly the statement there made.

Mr. Kittredge: Objected to as incompetent, immaterial and hearsay—not the best evidence.

A. "The average life of a good steel rail, properly manufactured and inspected, so as to eliminate all imperfections arising from the lack of ordinary care and skill, and weighing sixty to eighty pounds per yard, according to the weight of engines, has now been determined, with considerable approach to certainty, to be about one hundred and fifty million to two hundred million tons, or what is probably a more correct way of putting it, from three hundred thousand

to five hundred thousand trains. From ten to fifteen pounds or three-eights to five-eights of an inch in height, of the head of such a rail, is available for wear, and abrasion takes place at the rate of about one-half inch per ten million tons, or one-sixteenth of an inch per fourteen or fifteen million tons. This durability may be regarded as near a minimum for strictly first-class rails, and many recorded observations indicate a much higher durability."

Q. I will ask you if the inspection therein referred to is the inspection of the rails at the mills by the officers and agents of the railway constructing the line of road and using the rails? A. Yes, sir. An inspection of rails, and care in unloading and handling afterwards.

Q. I will ask you if that inspection would ordinarily eliminate all imperfect rails? A. As far as the human side goes, yes.

Q. Are you personally acquainted with this authority from which you read? A. Yes, sir. I served under him in Mexico on the Mexican National Railway.

Q. And how is he regarded by the profession upon the subject of which he writes? A. As well posted on those subjects and an authority.

Q. And is the book from which you read used in the colleges and schools of the country as a text book? A. Yes, sir. And every railroad engineer and managing officer, I suppose, has a copy of it.

Q. When was the Bessemer steel rail now used patented? A. 1855.

Q. And when did the Americans begin to manufacture such rails? A. In 1865, the North Chicago Rolling Mill rolled some rails experimentally before a committee of the American Society of Civil Engineers, but I believe it was in

1867 when they were first put on the market. I think the Milwaukee and St. Paul was one of the first roads to use them.

Q. So that the manufacture in America really began about 1867? A. Yes, sir.

Q. So that the experience with these steel rails in America began practically with the year 1867? A. Yes, sir; there had been some importations before that from England.

Q. From your own observation and experience, and assuming that the traffic in South Dakota over the complainant's lines would not exceed 1,500 trains per year, what would you say would be the reasonable expectancy of the life of the rail of the character you found in the track?

Mr. Kittredge: Objected to as incompetent and immaterial, not the best evidence, and no proper foundation has been laid for such testimony.

A. From my own personal observation of the brand and wear of rails on the Pennsylvania Road and from my knowledge of the position of experts on this subject, the life would be from thirty to fifty years. That is, thirty to fifty years is conservative for an ordinary average railway, and the traffic being light here, it might go considerably further. It has to be a matter of opinion, as the steel rails have not been used fifty years.

Q. I will ask you if you now call to mind any particular observation which you have made of the performance of a steel rail? A. Yes, sir; I remember distinctly on the west end of the Pennsylvania Company's lines—Pittsburg, Fort Wayne and Chicago—somewhere near the state line between Indiana and Illinois, a rail with a brand of 1874 or 1875, which I observed in 1890, still in the track—single track.

All of the heavy traffic of that line passed over it, and it was still in fair condition, having been a sixty-pound steel rail; it was worn considerably, and of course was soon renewed.

Q. What was the daily number of trains passing over that rail, at the time you made the observation? A. I could not say definitely; the traffic over that line is pretty well known; I should say thirty trains per day each way would be a conservative estimate.

Q. That would make about sixty locomotives passing over that rail each day? A. Yes, sir.

Q. I will ask you if you observed the character of the locomotives used by the complainant upon its lines of railway in South Dakota? A. Yes, sir; as far as I had opportunity.

Q. And what did you observe in that direction with reference to the weight of the locomotives? A. Well, they were all American type engines that I saw, and from my conversation with the enginemen as to the weights of them, found they were about thirty-four tons.

Mr. Kittredge: Wait a minute; let me ask a question All the information you gained on that subject is from engineers and trainmen? A. No, sir; I observed, as I say, they were American type engines. The weights as given by the engineers—

Q. That is what I am getting at? A. I did not weigh any of the engines.

Q. Did you get any information on the subject except from the engineers and trainmen? A. I did not weigh any of the engines.

Mr. Kittredge: Object to the witness giving any state-

ments made by the enginemen, for the reason it is incompetent, immaterial and not binding on the complainant.

The Witness: I say they were light American type; somewhat heavier for freight than passenger.

Q. State the weight, as you obtained it? A. About thirty-four tons for the freight and twenty-eight tons for the passenger.

Q. Are you sufficiently familiar with the subject of the weight of locomotives, so as to determine from your own judgment whether the statement made by the engineers were approximately correct? A. I think so; yes, sir.

Q. And about what would be the weight of the tender that you saw? A. I did not notice those especially. They would naturally compare with the weight of the engine.

Q. What is the ton capacity of an engine weighing thirty-four tons? A. Its hauling capacity?

Q. Yes, sir? A. Well, capacity, in the load behind the engine, depends, of course, on the condition of the track, the road-bed, the grading, the maximum grade of the road, length of the train. If you mean by capacity, the draw-bar pull, I can give it approximately. About one-quarter the weight on the drivers would be the available draw-bar pull.

Q. About what is commonly accepted as the capacity of a thirty-four ton engine? A. There would be about twenty-four tons on the drivers and one-fourth of this would be six tons, or twelve thousand pounds pull; that pull would be used up, of course, more quickly on a steep grade than on the level. On the level, it would be about eight pounds on the draw-bar to the ton of train, less the weight of the engine.

Q. Did you observe the passenger coaches used on the complainant's lines in South Dakota? A. Not especially.

Q. Are you able to state approximately the weight of passenger coaches that you observed? A. Well, I suppose they are ordinary light coaches. I did not notice them especially.

Q. Calling your attention again to the item on page 302, renewal of rails, I call your attention to the fact that Mr. Earling estimates the replacement at six and one-quarter per cent. per year. I will ask you what in your opinion and the information you have and have given us here would be the per cent. of renewal of steel rails per annum? A. I think one half of that six and one-fourth, counting on the life of the rail as thirty-two years, rather than the life of sixteen years, would be conservative for this line.

Q. And you think thirty-two years would be the maximum life on a straight line? A. It would be a conservative estimate for this traffic and alignment.

Q. And of course if only one-half of the rails were necessary to replace, it would make a corresponding reduction in the balance of the track material mentioned in that item? A. Yes, sir; one-half, approximately.

Q. I now call your attention to the details of item number 3, renewal of ties I will ask you if you have any information or experience upon which you could state with a degree of accuracy the life of cedar ties in this climate and soil? A. No, sir. I have not.

Q. I believe you estimated the number of ties in the complainant's lines in South Dakota? A. Yes, sir.

Q. And what is the total number that you make it? A. 2,816 to the mile—3,344,000 instead of 3,562,000.

Q. And assuming that Mr. Earling's estimate of renewals —10 per cent.—is correct, what is the number to be replaced each year. A. 334,400 ties.

Q. Placing the value upon these ties at 27.8 cents, as invoiced by the company July 1, 1897, and 21 cents freight, what would be the annual expense of renewal of ties? A. $163,856.

Q. Have you estimated the pounds of coal consumed by a locomotive in running one mile upon the average of freight and passenger service? A. Yes, sir.

Q. I will ask you to state the number of pounds of coal per mile, as you have estimated it, as being the average between the freight and passenger? A. I have taken forty pounds of fuel for the passenger and seventy pounds of fuel for the freight, and using the revenue train miles obtained from the annual report submitted, 1,277,500 miles in South Dakota, applying this average of the forty and seventy in the ratio of two-thirds freight trains and one-third passenger trains, which this report shows to be the proportion of train miles in South Dakota, I obtain 38,180 tons of coal. Adding to this 10 per cent. for switching mileage, which is large, I think, for this locality, or 3,818 tons, makes a total of 41,998 tons.

Q. I show you blue print which purports to be a monthly statement of the performance of engines of the Chicago, Milwaukee and St. Paul Railway Company, James River division, showing fuel expenditure for the month ending February, 1898, and ask you to state from this statement the number of locomotive miles that is disclosed there? A. Passenger trains, 10,371; freight, 9,501.

Q. And the switching trains? A. 1,752 miles; total, 21,-624.

Q. Now what per cent. of the total is the switching miles? A. It is between 8 and 9 per cent.

Q. And in your calculation you allowed 10 per cent.? A. Yes, sir.

Q. So that in your calculation you added more than this statement really discloses? A. Yes, sir.

Q. How many tons of coal does it show was consumed by the locomotives in running this number of miles? A. 655.3 tons.

Q. And what is the value of that fuel as stated in that report? A. $1,067.77.

Q. How much would that be per ton? A. A little less than $1.70 per ton.

Q. And at $1.70 per ton, what would the fuel amount to, taking the number of tons you have estimated? A. $71,397.

Q. What is the usual amount calculated for the use of locomotive engineers and firemen, nesessary brakemen and conductors, and cars constituting a construction train? A. I don't know as I can answer that question. It is in the neighborhood of $25, as given there. $15 for an engine and crew is a common charge. The Pennsylvania changes this from one division to another. Taken in connection with the cars and caboose and all, $25, the same as given by Mr. Whittemore in his estimate, is about right.

Q. Let me ask you, professor, in making these various estimates, suppose that the services of the fireman, engineer, conductor and brakeman, as well as the cost of fuel consumed by the locomotive, is charged up to South Dakota, in fuel and service items, would it not amount to a double charge if, in addition to that charge, the rate upon the freight moved on such train? A. Over the same distance?

Q. Over the same South Dakota lines? A. Over the same distance?

Q. Yes, sir. A. Yes, sir.

Q. So that if the service of the trainmen and the fuel consumed by the locomotive is included in the salary charge to South Dakota, and in the fuel consumed by locomotives in South Dakota, then there ought not to be any freight charges? A. No, sir; as I understand you to state it now.

And thereupon the taking of testimony in said cause was adjourned until 2 o'clock p. m. of said day.

May 2, 1898—2 p. m.

E. L. SMITH, a witness called as a witness on behalf of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Where do you reside? A. Sioux Falls, South Dakota.

Q. How long have you resided here? A. Thirteen years last fall.

Q. What business were you engaged in between June, 1896, and June, 1897? A. I was in the fuel business—coal and wood.

Q. And were you familiar with the market value of coal and wood at that time? A. I tried to keep myself familiar with it.

Q. I will ask you if you bought any soft coal in Iowa—that is, bulk coal? A. Yes, sir.

Q. I will ask you what that was worth at the mines on board cars? A. At what time?

Q. Between June, 1896, and June 1897. A. It was in 1896—I cannot be exact as to date, but I think it was in June, 1897—I bought coal at Rathbun for 85 cents a ton, but I think before fall the price was put up to $1 or $1.25. The time I bought the coal at 85 cents, I think there was a strike down there immediately after that, and that at the time the contract was fixed up, coal was put up to $1 or $1.25, I can't say which.

Q. That was soft coal? A. Iowa lump coal.

Q. What was the freight from Iowa points to Sioux Falls? A. $2 per ton.

Cross-Examination by Mr. Kittredge.

Q. What did you sell that coal here in Sioux Falls for? A. Our delivery price was $4.75. Our yard price was $4.

Q. The coal you purchased at 85 cents? A. Yes; but we did not have much of that trade for domestic use, simply for the summer; the most I used it for was for steam for electric light and for water works.

Q. And you got $4 for that? A. No; I sold it to them practically at what it cost me. I never got much out of those people.

N. O. WHITNEY, recalled for further direct examination by Mr. Null:

Q. I neglected to ask you this morning to state what techincal societies you belonged to? A. I am a member of the American Society of Engineers, the Western Society of Engineers, the Railway Club of Chicago and the Society for the Promotion of Engineering Education.

Q. Let me ask you if you had made your estimates of the

fuel per mile before coming here this morning? A. Yes; I had made those estimates from the general averages, as I have stated; I did not see this blue print until a few minutes before called here this morning. After looking that blue print over I made one change in this estimate. I had been in considerable doubt as to what percentage the switching mileage ought to be in this state, and had set it at 20 per cent., so as to be certainly large enough. When I saw Mr. Barr's statement was 8 and a fraction per cent. I altered it to 10 per cent; but we otherwise agreed to the pound—my previous estimate with the statement made by Mr. Barr on the James River division.

Q. I believe you stated this morning that you had taken an imprint of a rail section—one that was resting on the poles alongside of the track for repairs? A. Yes, sir.

Q. Also an imprint of a similar rail in the track? A. Alongside, yes, sir; near the mile post.

Q. I will ask you if you discovered any difference in the condition of the rail in the track and the one on the post, with reference to wear? A. I took the prints on the head of the rail in the track for the purpose of determining whether there was a noticeable difference in the wear of the rail in the track, and I also, besides taking the print of the head of the rail in the track, laid a five-foot rod that I had with me along on the top across the rails and measured down accurately with my steel foot rule to the base in order that I might check the height of rail in the track with the height of the rail of which I had a complete imprint; and I failed to notice any difference in the height larger that a fraction of 1-32 of an inch. There might be a fraction of 1-32d of an inch difference in the height of the rail in the track from that on the post alongside the track.

Q. If you saw any difference there it was imperceptible? A. Practically so. Yes, there was a slight difference—a fraction of 1-32d of an inch less in height.

Q. I show you Exhibits 70 and 71, and ask you to state specifically which of these is an impress of the rail upon the post and which is an impress of the rail upon the track? A. Exhibit 70 is an impress of the rail upon the post and the two impresses of heads only of Exhibit 71 are imprints of the heads of rails in the track. The bottom line in both cases being the line of level of the top of the splice bars, each imprint being taken at the end of the open space between that rail and the adjacent rail.

Q. The imprint of the full section of the Exhibit 71? Tell us again what that was. A. That is the imprint of a North Chicago Rolling Mills Company steel, delivered near that same point. I said it had been sawed off and re-punched.

Q. I will ask you if you have compared the height of the 1888 rail with the height of an 1875 rail? A. Well, I have noted on these two exhibits the heights of each imprint. The imprint shows the true height.

Q. You testified this morning concerning a charge in Mr. Whittemore's testimony for interest upon the cost of the road for a period of time when it was supposed the road was in the process of construction and not earning anything. I will ask you if you think that item should be entirely eliminated? A. No; I had no such intention. I was criticizing the item as being too large, taking the whole cost of the line for one whole year, as being too large. In my judgment, as to the time during which these ties, etc., are stored, and the material is not bringing in any revenue, six months would be a liberal allowance for that period. One-half the amount as mentioned there, one-half the line

having been built in various years from 1879 to 1886, in one, two and three hundred mile stretches.

Q. And would the interest charged apply to the whole cost of the road per mile or only to these items which would naturally be non-earning during the period of construction? A. Well, I don't know what items you mean would be earning during construction. There would be some items like ties which might be gotten out previous to track laying, which would be longer at interest, not earning, than steel rails for instance, which are generally rushed out to the track as soon as they are gotten out of the mill. That was the customary way of mills during those days, not being able to keep up with the orders.

Q. So that it would be manifestly unfair to put the interest upon the total cost of road for a whole year before revenue began? A. In the shape of first cost.

Q. Suppose that the road was constructed from station to station, that is, the construction completed under proper management, that the traffic began immediately and tickets were sold and the freight was billed to the end of the road, if there would be such a delay as would warrant the charge even of six months' interest. A. No; it would be then very much less than that.

Q. Assuming that a given line of railway in South Dakota was originally laid with new iron rails in 1881, and then was relaid again in 1887, and again relaid at a period between 1887 and the present time, what would you say was the occasion for such relaying? A. If the relaying took place over the whole division and not at exceptional places like on curves and so on, I would say that the first relaying was because the iron was not equal to the traffic, and according to the practice of good roads, should be relaid with

steel, and that the succeeding relaying of steel was due to a demand for a stiffer and heavier rail, and not from the wearing out of the steel.

Q. Or the wearing out of the iron rails originally? A. Well, the iron is so far back, it has been out of the main track too long for any well-conducted road to continue using; I would not say that this traffic would tear up iron rails.

Cross-Examination by Mr. Kittredge.

Q. You estimate the cost of laying rails at $240 per mile? A. I took those figures from the Pattersonville extension, which is a statement of the final estimate made to contractors.

Q. Is that the only basis of your estimate? A. Oh, no; I have information of my own.

Q. Well, now, independent of what you discovered in that Exhibit 55, do you say $240 per mile is a fair cost for the laying of rail? A. The track-laying machines that are in use for track laying will lay it at a cost of about $150 per mile—actual cost.

Q. When were these track-laying machines invented? A. Comparatively recently.

Q. Since this road was built? A. Yes, sir.

Q. You were trying to testify about the original cost of construction? A. Yes, sir; you asked me for my information.

Q. These track-laying machines were not in existence at that time? A. No.

Q. They were laid by hand, weren't they? A. Yes, sir.

Q. Now, give us the estimate of cost of laying this track

at the time it was built from 1879 ot 1887? A. Well, it might be anywhere from $200 to $300 or $400; it depends on the contract you made.

Q. I am not speaking about the contract as made. What did it cost to put them in? A. The actual cost?

Q. The actual cost of putting in the track? A. I was giving you the cost to the railway company.

Q. What elements do you include in your estimate? A. The contractor's pay for doing the work.

Q. I want you to get down and give me the elements of cost that enter into the laying of the track? A. The elements of cost are the labor which the contractor has to carry forward from the train on which the material is brought to the end of the track—carry forward the ties, lay them down and push forward the iron on the iron car over the portion that has been laid ahead of the surfacing, bringing forward the supplies, the bolts, nut locks and spikes, all of which are delivered up at the end of the surfaced track by the railway company, and putting these together, lining to the stakes given by the engineer, giving each tie a bearing, and an even surface of track, so that the construction train can push the material forward to the end of track continuously and so avoid being obliged to push the material forward by a push car very far.

Q. Put down the figures of these different items? A. In figures?

Q. Yes; for a mile of track? A. Well, you can lay a mile of track with a force of twenty men, forty men, sixty men or eighty men.

Q. Give your figures on the basis that would be the most economical? A. Well, I have looked after a great many miles of track—

Q. Answer the question, please? A. I do not know that there is any force—that there is a force of men which in every locality would be the most economical. What would be economical in one state, where rock and heavy work predominates, might not be economy on prairie ground.

Q. Did you ever lay any track or have any experience in railroad building in this north-western country? A. Yes, sir.

Q. Where? A. At Chicago.

Q. I am not talking about Chicago—I am talking about this north-western country. A. Now, in Pennsylvania, we talk about that as the north-western country.

Q. In this country, I mean? A. Not in South Dakota.

Q. You know Don J. Whittemore, chief engineer of the Chicago, Milwaukee and St. Paul road? A. Yes, sir; I do. I have great respect for him.

Q. He is one of the head railway engineers in this country? A. Yes, sir; or in any other country.

Q. And he stands at the head of his profession in this country, does he not? A. Yes, sir; I think so.

Q. Mr. Whittemore stated that the most economical way of laying track was to lay half a mile a day; assuming that is correct, go ahead and give the figures and the items which compose the elements that enter into the laying of track? A. Well, in a general way, I have four mules or horses and forty-three men as a force, which would do that work easily in half a day. Four men with mules snaking forward ties and rails in advance. Eight mules with push car for loading and unloading into the iron car and shoving forward from the delivery train to the end of the track, and two men to put on the splices, bolts and nut locks, spiking,

and ten men surfacing. I have added eleven men who might aid in any one of these operations to keep up the movement of work according as one part was in advance of the other, making forty-three men and four mules, or horses if you prefer.

Q. To lay half a mile of track a day? A. Yes, sir.

Q. Now, what do you figure that would cost? A. At $1.50 a day the price of the men would cover the extra cost of the foreman or superintendent, and the horses $1 a piece; $68.50 or $70.

Q. Say $70? A. Yes, sir.

Q. For a mile, then, you figure that for that service it costs $140? A. In that neighborhood. It might be less and it might be more. Wages are oftentimes slightly less than that.

Q. As a matter of fact, in laying the track, is it possible for the laying of rails to be done without the use of a great many more teams or wagons to haul it from the point where the railroad can safely haul it, up to the point where they are used, and don't they string them away along ahead? A Well, if you were in a rush and wanted to lay eight miles a day, you would have to do it.

Q. Well, I am not speaking of that sort of track laying; do you consider that an economical way of laying track? A. That might be if the money at interest were taken into account.

Q. I am not talking about the money at interest; when they lay track, seven or eight miles of track a day, as a matter of fact, don't they put very few spikes under the rails? A. No; that matter can follow. When they are rushing the laying of track, they allow for men to follow up and do that work.

Q. How many men have you got there surfacing? A. I have ten men surfacing, with possibly eleven more to add to it.

Q. Do you say ten men can surface up half a mile of track a day? A. With the help of these eleven men additional, they would do it.

Q. Can twenty-three men do that in a day? A. Yes, sir; if the grading has been properly done, but if they have also to grade the road they could not do it.

Q. Assuming it has all been properly done, do you say twenty-three men can surface it up? A. Yes, sir.

Q. How would you say was an economical way to manage the supplies which you use in the construction of track? A. In what respect?

Q. Getting them to the front? A. Well, when the contract is let to an outside party for track laying, the company, of course, must see to it that the material is furnished properly at the end of the surfaced track, so as to fulfill their part of the agreement, which is to see that the material is handed over to them.

Q. You say the contract price in there is $240? A. $210 and $240. There are two separate contracts.

Q. What does that service include? A. This work I have described.

Q. So that includes the surfacing? A. Yes, sir.

Q. Are you sure about that? A. Yes, sir; it is mentioned.

Q. How about getting these supplies up to the front from the depot? A. In what respect?

Q. Is that included in the estimate? A. No.

Q. Now, what is the expense to the railroad company of doing that work? A. I don't know—Mr. Whittemore adds $140 a mile for that work.

Q. Well, what do you say about that? A. I have already stated about that I believe.

Q. You think that that is fair, do you? A. I said I had no means of checking that because the center of supply was unknown to me, and therefore I could not check it; it seems high. I think it has been stimulated as a good many items there, probably, have been, but cannot be shown.

Q. You don't dispute that item? A. I have no means of doing it—no.

Q. So, then, to the $240 you add $140 per mile, do you? A. I add $140.

Q. Isn't it right to add the $140? A. No.

Q. Didn't Mr. Whittemore, in his estimate of $450 per mile, include the cost? A. No.

Q. Are you sure about that? A. He has two separate items there, one is for that and one is or track laying.

Q. Now, where is that? A. Page 423 of the record, 1,187.21 miles of track laid and surfaced at $450; then three lines below is 1,101 miles of material which was moved to the front from the nearest point of distribution at a cost of $140. That is the item I have no means of checking, and I so stated in the direct examination. I was going to say I think that item is large, but I have no figures to check it by.

Q. Then you think Mr. Whittemore is incorrect in his estimate of these two items, do you? A. Which two?

Q. The two items of which we are talking. A. I think so; yes. The first is incorrect evidently, by the evidence I have submitted—the $140 I think is padded, but I have no means of showing it.

Q. You have never had any experience in laying track out in this country? A. Not in this State of South Dakota.

Q. Never had any experience in regard to surfacing? A. Yes, sir.

Q. In South Dakota? A. Not in South Dakota.

Q. Confine yourself, if you will, to South Dakota; that is what we are talking about; South Dakota lines—you never had any experience in track laying or surfacing in South Dakota? A. Not in South Dakota.

Q. You say Mr. Whittemore is clearly in error in his estimate of $450 per mile for track laying and surfacing? A. I think so, by this evidence.

Q. How did you arrive at the figures 2,816 ties per mile? A. By direct count at the various stations I stopped at, and by the count of the mile or two south of Sioux Falls here. By direct observation.

Q. Now, in what manner did you make count at the different stations—how many counts did you make? A. Well, in some places I counted three and four rails, and other places two and three, and some places single rails.

Q. Where were these counts made? A. At all stations along the lines I have referred to.

Q. Do you know the length of rail at those stations? A. I have stepped over a number of them, and they were all thirty-foot rails.

Q. You made no actual measurements of the rails at the places you made this count? A. I made such a measurement—I stepped the distance off

Q. I am speaking about actual measurement? A. Well, that is actual measurement.

Q. Can you step off any given distance and tell the exact

distance? A. There is no such think as an exact measurement possible.

Q. Well, you understand what I mean—we don't care for a lecture upon that subject. A. According to the greatest experts on this question, our United States Coast and Geodetic Survey Engineers, you cannot measure any line exact—it must be with a certain element of error, no matter what degree of precision you use.

Q. Then you mean to say you are able by stepping off to have as little error in your measurements as a man would have in taking a tape measure and measuring off the same distance? A. No.

Q. Now, explain your measurement of these rails. A. I stepped them off.

Q. Did you make any actual measurement by taking a tape line? A. Oh, no.

Q. The only measurement you made of the rails where you made the count of ties was by stepping it off? A. No; that is not the only one. At the stations I stopped that was the only method, but on the two miles from Sioux Falls here and south, I measured with a five-foot pole which I cut with my steel tape measurement, and I measured a great many rails actual length.

Q. That was here at Sioux Falls? A. Yes, sir.

Q. And the result of the measurements and counts as you have stated at different stations on the trip that you made the other day is that there are 2,816 ties per mile? A. I do. I found sometimes seventeen ties to the rail. At other times, and more numerously, I found sixteen ties to the rail, and on a great many occasions I found fifteen, and those fifteen ties were mostly, I think, where the twenty-eight feet rails were used, because two feet less than thirty

feet would demand one tie less per rail, but I found a number of instances on this mile or two south of the city here where from actual measurement of the rails which were thirty feet long, I found fifteen ties only to the thirty feet of rail. Taking all of these together it is certainly, I think, in my mind, that sixteen ties to the thirty feet of rail is the proper number used here now, which makes 2,816 ties to the mile.

Q. How many rails thirty feet in length are there to a mile? A. 176 on one side of the track.

Q. How many ties under a rail thirty feet in length would there be in order to make 3,000 ties per mile? A. Seventeen.

Q. From the inspection that you made you wish to contradict the statement of Mr. Earling, Mr. Whittemore and all of these other gentlemen who spoke from actual knowledge of the number of ties per mile in South Dakota, do you? A. That is the present state of affairs in the track.

Q. As you observed it? A. As I observed it.

Q. And you observed it for this mile in Sioux Falls and the stations you passed through? A. Yes, sir.

Q. And that is the way you want to leave it? A. Yes, sir.

Q. Now, the freight on ties—I do not know whether I understood you correctly about that—did you criticise that item any further than the difference that it would make in the number of ties per mile? A. Are you referring to Mr. Whittemore's estimate or Mr. Earling's?

Q. I am referring to your testimony. A. The matter of freight on ties figures in both estimates, as I have testified. I do not know which you refer to.

Q. If there were only 2,816 ties per mile where witnesses for the complainant have testified that there are 3,000, there would not be as many ties hauled and there would not be as much freight; now, is that the only item of discrepancy or are there others. A. Well, in Mr. Whittemore's estimate the number of ties is reduced by me from 3,562,000 to 3,444,000; these at 30 cents, the same price which Mr. Whittemore uses, will give $65,400 less for that item of cost of ties. In Mr. Earling's estimate he has used the same number of ties as Mr. Whittemore used, 3,562,000, ten per cent. of which he renews annually and charges 58 cents per tie here in South Dakota. In my estimate I reduced this number to ten per cent. of the number I show in the track— to 334,400; then instead of using 58 cents for the cost of a tie in South Dakota, I use 27.8 cents as the cost of the tie, as shown from the exhibit made here of the last annual report of ties on hand by the company, which is 27.8 cents, and I add to that the freight which Mr. Earling testifies is the freight to South Dakota on a tie, 20 to 22 cents. I take 21.2 cents, making an even 49 cents for the cost of the tie in South Dakota, instead of 58 cents.

Q. In other words, your changes are first in the number of ties, growing out of your estimate of 2,816 ties per mile? A. Yes, sir.

Q. And further, in the cost of the tie being 27 cents per tie— A. (Interrupting.) In South Dakota, being 49 cents instead of 58 cents per tie.

Q. I am speaking of the original cost of ties, exclusive of freight. A. He does not give the original cost of ties exclusive of freight.

Q. Mr. Earling in his estimate gave the cost of ties at 58 cents apiece; at what figure do you place them? A. 49

cents per tie, being made up of 27.8, the average cost of the tie, as shown by the report of the company in its item of ties on hand—the annual report of 1897, I believe—and add to that Mr. Earling's own statement of the cost of freight per tie, which is 20 to 22 cents, making 49 cents.

Q. You make no criticism, as I understand, of the estimate of Mr. Whittemore, regarding betterments? A. No; I make no question about that.

Q. The four items you criticize are the number of ties per mile—that is one? A. Yes, sir.

Q. The cost of hauling and surfacing of track per mile? A. Yes, sir.

Q. The freight on ties? A. Yes, sir.

Q. And the interest? A. Yes, sir.

Q. Now, regarding that interest item, suppose that the railway decides that it will buld a line of road, is it a common thing to go ahead and build that road before they know where their money is coming from to pay the bills? A. No.

Q. Now, how do you understand that they raise that money? A. I suppose the number of ways is pretty nearly infinite.

Q. Well, what is the common way? A. Well, it takes very little money to start the exploration.

Q. Assuming that you have passed that point, you have made your explorations and you have decided to construct your line? A. Then it takes comparatively little money to make the actual location.

Q. Suppose you have done all that, suppose you have come down to the point where you are going to do grading, you are going to get supplies on hand of all kinds to com-

plete your railroad? A. Well, when the surveys are under way, exploration and location surveys are under way, for the means for pushing the work further, when the large cost begins, that is, the letting of contracts and paying of contractors, it is necessary in the way of raising money—

Q. Now, then, suppose, as in the case of South Dakota, the complainant's road was built largely by the issuance of bonds, and they sold those bonds, then they would have on hand either the money or the materials, would they not? A. I do not know that the whole sum need be raised to push the line.

Q. Well, suppose that they were issued from time to time, that would be the ordinary way of raising it, would it not? A. It depends on who is back of it.

Q. Suppose the Milwaukee road was back of it—suppose it was the Milwaukee road's bonds? A. I don't know as it would matter about the interest.

Q. It is not the usual thing for a railroad company to go on and commence the actual construction of a road in the making of the dump and the purchase of materials and supplies of all kinds without knowing where the money was coming from or that it should be on hand, is that right? A. Not money for the whole line built, equipment and stations and all.

Q. I am speaking of the line you propose to build—would not that be prudent and the most economical way to build that road? A. Yes, sir.

Q. Now, then, there are times in the year when they are able to purchase material at cheaper prices than at other times, is not that so? A. Yes, sir.

Q. That is true of ties and it is true of rails, and is not

that true of everything that goes into the cost of the construction of railroads? A. Yes, sir.

Q. Now, they purchase these materials and supplies and push them out at what they call a depot, do they not, for that purpose? A. Yes; but not in the case of steel rails, however. The rail of the past, especially in those years, they were mighty glad to get the rails when they were ready to lay the track, and they would rush them through; there was very little storage of steel rails in those days. It is true in the case of ties; of course they are gotten out in the winter months.

Q. Was it true of iron rails? A. No.

Q. Were all of the iron rails made largely in 1879 and 1887? A. In 1887.

Q. Yes. A. They were not rolled, I guess, in 1887.

Q. When were they last rolled? A. Well, they began rapidly to fall off in the beginning of the '70's.

Q. They made a whole lot of steel rails then? A. They increased each year.

Q. When did they practically cease? A. Practically a'bout 1885.

Q. Where were these iron rails made? A. At the rolling mills.

Q. Where? A. In the North Chicago Rolling Mill, and in Ohio and Pennsylvania.

Q. The North Chicago Rolling Mill didn't roll a great many rails in 1880 at that time, did they? A. The same as all mills, they rolled them as they had orders, but the orders dropped off because superior material was required. The demand for rails at that time was such that if the Bessemer process had not been invented the price of iron

rails would probably have gone up tremendously; the demand, in other words, was too great for the mills to supply them with the old method of rolling iron rails.

Q. In any event, then, these rails had to be gotten to the front, and there they began to unload them? A. No; I would not say that. Quite generally they loaded them at the rolling mill and forwarded them as they needed them at the end of the track without any rehandling. This rehandling, you know, is very expensive and costly work.

Q. Suppose, in the construction of these roads, they had the supplies on hand, purchased them, took them out to the front, had a depot there, and then, as they had occasion for them, shipped them from the depot to the front. Is a year's time for all of that too much? A. I think I gave you my judgment on that as being too much because as I stated their steel rails were loaded at the mill and rushed forward without rehandling. It is expensive to rehandle this material. It is costly work and they would push the rails straight through. This might be true of ties also.

Q. And all other supplies? A. Not necessarily.

Q. I am speaking of bridge timbers, trestles and all that kind of business—they would have those on hand? A. I doubt that, because they can buy those in the market as they are needed; but ties, they have to get them out in the winter time and store to be used as they are needed.

Q. How about the bridge timbers? A. Bridge timbers could be bought as occasion demanded.

Q. Would not they get a supply on hand? A. Yes; they always keep a supply on hand.

Q. Would not they get a large supply if they were going to build a large amount of road? A. Oh, not 1,100 miles.

Q. But for building two or three hundred miles, would not they get a large supply on hand? A. Yes, but not the whole material.

Q. Not to use on that entire road? A. No; not to store up.

Q. They would not purchase that? A. No; track laying at half a mile per day would not warrant rushing in all of your material to a depot and store it there for six months or a year. Suppose they were building in several places in South Dakota, in each case it would be proper for each line to keep material on hand sufficient to keep all work moving without clotting their depot supplies.

Q. How many miles of railway in the State of South Dakota such as we have would it be economy to build in a single year to use the most men and do the most work and get the most out of it? A. Well, that's a pretty hard question; it depends on the number of approaches you have in the state, I suppose, and a great many other things. I do not know that I can answer that question.

Q. Suppose you are building this I. & D. Division from Canton west to Mitchell, how many miles would it be economy to construct of that line in one year? A. Well, if the traffic were waiting, the quicker the revenue began possibly the better; the quicker the track was done and service begun the wiser, and it would be well to push it straight through without any delay.

Q. Independent of the revenue feature, just the mere matter of construction? A. On every work the time for completion of the line is usually about the minimum time in which the heaviest tunnel or heaviest piece of work can be completed, and all of the energy of the company is put upon the heaviest piece of work so that the track will probably

meet in the tunnel or at that point where the heaviest work is. I do not see how you can divorce the problem of construction from the traffic. If the traffic were awaiting the construction of the road I think it would be economy to rush the work in order that revenue might begin as soon as possible.

Q. Assuming that in the case of the complainant, it built its road out ahead of the settlement of the country, where there was no revenue awaiting it, then what would you say would be an economical management of the construction of its line? A. If there was any land speculation in connection with it it might be still problematical.

Q. Leaving out your land speculation, then answer the question, if you will? A. I suppose follow along pretty gradually—it would be advisable to let the country settle up as you went along rather than to get too far in advance.

Q. How many miles, supposing that you were pushing it as fast as it would be economical to build your line, independent of these other features, to put down your line of railroad? A. I can't answer that question without connecting it with a boom or various traffic considerations.

Q. You examined, you say, the rail south of town, at the eighty-nine mile post? A. A number of rails; yes, sir.

Q. The one set up on posts had the '75 brand on it? A. Yes, sir.

Q. You don't know how long that had been there? A. No.

Q. It was stated that somewhere near there they had a lot of relaying rails—how do you know they were for relaying purposes? A. They had been unloaded, two rails for every thirty feet—one on each side.

Q. You saw those rails there? A. Yes, sir.

Q. How do you know they were to be relaid? A. That is the only inference I can draw.

Q. That is an inference, that is all? A. Oh, yes; I have not any word from the superintendent that he is going to put that steel in there.

Q. Who is Mr. Wellington, whom you mentioned as a writer? A. An author; yes, sir.

Q. He has had experience in the operation and management of railways? A. Yes, sir.

Q. In what capacities? A. At the time I met him, he was the principal assistant engineer in charge of the location of 1,800 miles of the Mexican National Railway in Mexico, and I served directly under him for a number of months —for a year or so, and at the same time he was the chief engineer of the Jalapa line, which was being located from the City of Mexico down to Vera Cruz via Jalapa, and after 1883, when I left Mexico, he was assistant general manager of the Mexican Central Railway system, which was already partially in operation and partially under construction.

Q. Has he had anything to do with the operation and construction of railroads in South Dakota? A. Not that I know of

Q. Has he in the western country? A. He has in Ohio, before he went to Mexico, but previous to that I don't know what his experience was. He was appointed judge of the famous brake tests that were made down there in Iowa in 1885 or 1886, when the railroads all agreed to leave to him as a judge the figuring of all of the comparative values of the various brakes, etc. He had a large experience in such matters.

Q. The extracts you have read from this book assume that it was a perfect rail? A. No; I think not. There is no such a think as a perfect rail. Perfect, in the sense in which I used it—free from any spots or blemishes that the inspector would discover, but not a perfect rail.

Q. A perfect rail, as far as anyone can determine, is that what you mean? A. Yes, sir; a rail that has passed a careful inspection, such as the St. Paul system would give it.

Q. Is it not true that a steel rail, perfect on the face, after a few years' wear entirely goes to pieces? A. Oh, yes; rails are sometimes taken out in four or five years on a curve.

Q. What do you mean by stating that the life of a rail was from thirty-two to fifty years? A. That is what I said.

Q. Do you mean that it is true of some rails, or that it is the average life of a rail? A. I mean that with such a rail as we have described and with engines not too heavy to destroy the material, and on a comparatively level track—comparatively free from curves, such as the Dakota lines—that thirty-two to fifty years would be a comparatively conservative lifetime.

Q. The average life? A. On straight track, comparatively level track, the life would be that long.

Q. The average life? A. That is a conservative estimate of the life of a rail.

Q. Then you want to testify that the average life of a steel rail is thirty-two to fifty years? A. I do.

Q. Have you had any experience in the operation of railways? A. Not in the capacity of president.

Q. I mean in the capacity of the actual operation of railroads? A. As manager?

Q. I mean as superintendent? A. No; not as superintendent nor manager nor president.

Q. You have had only such experience in the operation of railroads as was incidental to your business as an engineer? A. Yes, sir.

Q. As a civil engineer? A. As a civil engineer, yes, sir.

Q. Do you know Mr. A. J. Earling? A. I know of him very well; I do not know him personally.

Q. Do you know whether he has been in the railroad business all of his life? A. I have read his testimony over.

Q. Did you read Mr. Collins' testimony? A. Yes, sir.

Q. Did you read Mr. Truesdale's testimony? A. Yes, sir.

Q. Did you read Mr. Harahan's? A. Yes, sir.

Q. Did you read Mr. Brown's? A. I don't remember Mr. Brown's.

Q. Did you notice that part of their testimony which was to the effect that the average life of a steel rail was about sixteen years? A. I noticed it in the case of Mr. Earling's, but I didn't notice it in the others; I don't recall it now in connection with the others.

Q. You say Mr. Earling is incorrect in his statement? A. I say that a rail does not wear out in sixteen years, yes, sir.

Q. The average rail? A. The average rail on lines such as these, and the best evidence to that fact is the '75 brand of steel which has already had twenty-three years' use in that track which I closely examined to see where the wear

was, and it fails to show any great wear in twenty-three years.

Q. Do you know when this road was built? A. I do not happen to know, but I think it was somewhere in the early '80's perhaps.

Q. Do you know whether that rail was in that track for twenty-three years? A. No; but it was in some track.

Q. How do you know that it was in any track except that one? A. No railroad buys steel to stack up.

Q. Is not it a fact that the railway companies have their older rails at or near stations, and their newer rails out between stations? A. That is quite frequently the case, I suppose.

Q. That the renewal is delayed at the stations for the renewal of track along where the speed is greater—out in this country, where they stop at every station, and is it not true in every country where they stop at every station that they put their poorer and lighter rails where they run at a low rate of speed; is not that true? A. As I stated, they leave to the last the renewals, but when the renewals are under way, that don't stop at stations in renewing steel rails; it is continuous. This '75 steel extends clear on down pretty near to Canton.

Q. Did you examine every rail to see? A. I examined it every stop, and then the same rail was used in between.

Q. How many stops did you make between here and Canton? A. I think there were only two.

Q. Just one, is not there? A. Hill Siding and Harrisburg—we stopped at Harrisburg, but it is plainly to be seen that that steel is continuous for I can recognize it by the head; the head is narrow. The new steel that is going in there is broader; it is very perceptible to the eye.

Q. Where did you make that inspection—from the train? A. Yes, sir.

Q. Then you got out on the rear of the train and looked back over the track? A. Yes, sir; I rode over the whole line either on the back platform or rear end of the car.

Q. And from riding along the track, you could determine the kind of steel it had? A. No; I could recognize the '75 year steel because it has a peculiarly narrow head.

Q. And you did recognize it as the train was going along? A. Yes, sir; as the same rail I examined.

Q. How fast did that train move? A. Oh, at varying speeds; the time table would show. It is not a very rapid train.

Q. About twenty-five or thirty miles an hour? A. Better say about twenty or thirty miles an hour.

Q. How long did it take to pass over a rail of thirty feet in length? A. Do you want me to figure it our accurately?

Q. Yes; I would like to see how quick you can observe? A. Oh, something like a rail and a half a second.

Q. You can tell the kind of rails you are passing over at that rate? A. In general. Not always—but this is an exceptional rail.

Q. You can tell whenever you see a rail bearing the mark '75 going at that rate of speed, can you? A. My statement was, that having seen that rail for two miles south of here, south of Sioux Falls, and having seen it at the two stops at Hill Siding and Harrisburg—I will limit it to Hill Siding, for at Harrisburg I failed to see the brand—having seen it at both ends, and watched it in between, I am quite satisfied that that steel is the '75 brand, especially as relayers were distributed out along the route also.

Q. And you passed over one and a half of those rails every second; is that right? A. Yes, sir—approximately.

Q. You stated something, I think, about the pull that the engine had; does not that depend on the speed at which the engine is going? A. For a freight train it is practically the same for all speeds, except that immediately at the start, and up to twenty-five miles an hour.

Q. Supposing they are moving along about as fast as a man can walk, do you mean to say that the pull of an engine is the same as when the engine is going at the rate of twenty-five miles an hour? A. Practically the same—its capacity for pulling traction is the same.

Q. Then you mean the capacity for pulling? A. Yes, sir.

Q. Not the actual pull, is it? A. Adhesion due to its weight on the rails.

Q. The speed of motive power has nothing to do with the weight of the freight train? A. Oh, yes; when you get beyond twenty-five miles an hour, velocity resistances come in and the capacity is not so great.

Q. Under twenty-five miles an hour, the speed of motive power has nothing to do with its pull? A. From twenty-five miles an hour down to six miles per hour.

Q. How is it from the starting point up to six miles per hour? A. We are talking about tractions, the capacity of the pull of the engine.

Q. Yes; you made some such statement about the pull of the engine. A. I will not limit it to six miles an hour. To where the velocity resistances begin, the capacity of the pull is practically the same.

Q. So, then, it makes no difference up to twenty-five

miles per hour the rate of speed at which the motive power is moving? A. Practically not; no.

Q. What is the difference beyond that? A. The velocity resistances, head winds, etc., come in to modify them and reduce the pull.

Q. You have stated, as I remember, you have not reached this estimate regarding the life of a rail from an actual observation for years? A. I have merely taken Mr. Earling's estimate of the life of a tie. I have not observed a rail for fifty years.

Q. Have you for thirty years? A. No.

Q. If your statement is correct that the average life of a steel rail is from thirty-two to fifty years, and the Chicago, Milwaukee and St. Paul Railway Company did not commence to lay steel rails until 1867, then it would not have expended anything for the renewal of steel rails? A. No; I did not say that.

Q. Well, now, what do you say regarding that? A. I say that the renewals in such a country as South Dakota on comparatively straight, level lines, are not due to the wearing out of the steel, but due to the increased weight of the rolling stock, etc., making it necessary to have a stiffer rail, and my evidence for that is right here in South Dakota for this mile or two south of Sioux Falls, where 1875 steel has been in service for twenty-three years, and shows but very little wear on the head. But the company is relaying there, or preparing to, I believe, because of the fact that the rail weighs about fifty-one pounds to the yard and is of an old design, not stiff, while the relayer which is to be in there is a taller, heavier rail, more suitable to the present traffic. The relayer itself—some of those relayers are stamped 1880 and 1881. They have had seventeen or eighteen years wear

elsewhere, presumably under heavy traffic, and are not worn out, and they will be relaid here. And I believe that that evidence is alone sufficient to support this statement I make that thirty to fifty years is a conservative length of life of rail under the conditions existing in South Dakota.

Q. You don't know where these rails have been? A. No.

Q. That is just your supposition, that is all there is to that? A. That is all.

Q. You spoke about a rail in the Chicago, Pittsburg and Fort Wayne Road that was put in in 1873? A. No; in 1874 or 1875, I don't recollect just which.

Q. You saw it in 1890? A. Yes, sir.

Q. Whereabouts in the track was that? A. That was somewhere between Whiting and the state line.

Q. What is the character of the country? A. Just about like this—Northern Indiana.

Q. Straight track? A. Straight track—level.

Q. Was it located in such a way that there was any grinding upon that rail? A. Well, the drivers of the engine would do some, as they do here.

Q. No curves for it to grind on? A. No; it is very much like this South Dakota country.

Q. You say that was taken out when? A. Well, it had not been taken out then, but they were preparing to do so in the next two or three years.

Q. That was about sixteen or seventeen years after it was put in? A. Yes, sir.

Q. How do you explain the life of that steel rail? A. That rail when it was put in was a sixty-pound steel rail,

and the enormous traffic of the whole Pennsylvania system, including the Pennsylvania Limited, and all of the immense freight traffic of that system in both directions for these years had been going over that single rail and it was not yet worn out, but owing to the demand which is recognized by all railroad men that heavier and stiffer rails make increased safety and greater speed possible, they are renewing with seventy or eighty pound steel.

Q. That is regarded as good business management? A. Yes; to increase the weight of the rail.

Q. And to take out the rails before they are worn out; is not that right? A. That is what they do.

Q. It is not prudent to manage a railroad in any other way, is it? A. It is agreed by all railroad men that that is the best way.

Q. In your estimate of the life of a steel rail, from thirty-two to fifty years, do you wish us to understand that is it safe to leave steel rail in for that length of time, or do you mean that it shall be worn out at the end of that period, or what do you mean? A. I mean that the rail is not worn out; the rail is renewed because of the large difference in the weight of the engines and rolling stock. And these rails for instance these 1875 year brand rail which have had twenty-three years of wear already, they would have an indefinite life; thirty to fifty years is conservative and much more possible elsewhere under the conditions under which they were originally laid.

Q. It would not be worn out in from thirty to fifty years; it would simply be prudent to put it somewhere else where the traffic was lighter? A. Yes, sir.

Q. Then, according to your estimate of the life of a steel rail, it would last that time and be safe, economical and

prudent management to leave it in that length of time? A. Under light traffic.

Q. Under light traffic? A. The same condition of traffic.

Q. When that time passed, from thirty to fifty years, then it would be prudent to take it out and put it somewhere else? A. If it were worn out.

Q. At the end of thirty-two to fifty years, it must be worn out? A. No; that is conservative; it might run considerably beyond that.

Q. How high might it run? A. Well, no one knows; we have had only from 1860 to 1898; we have had thirty-eight years to determine that, both in Europe and America, and I don't know but that it is a matter still of opinion based on all of the evidence possible to accumulate.

Q. You think that rails that were rolled in 1855 are still in tracks? A. No; on account of the changed traffic conditions I speak of. The rails then were rolled very light and none had a design of rail which in stiffness and adaptability to service compares with the present one adopted by the American Society of Civil Engineers which will probably be used hereafter on all of the roads.

Q. They are making at the present time as good a rail as they have made at any time since the discovery of the process? A. I think they are getting back now to manufacturing steel rails as well as they did in the early '70's. The general criticism was that the work was not properly done during the '80's and the steel was not so good as in the '70's, because of the immense demand for rails.

Q. How long would steel of that kind last? A. I don't know.

Q. The steel rail that is made to-day by the present proc-

ess and put down upon these prairie roads, how long do you think it would last? On a straight track—no curves? A. Thirty-two to fifty years would be a conservative estimate.

Q. How long might it last? A. My judgment probably would not be of great value; I might give what is my opinion and what is the concensus of engineers on this subject. I have studied very closely.

Q. Give us your judgment about it, and your opinion? A. Thirty-two to fifty years.

Q. You say fifty years? A. Yes, sir.

Q. How much longer than that might it be? A. An indefinite time.

Q. Would it be sixty years? A. It might be.

Q. Seventy? A. It might be.

Q. Eighty? A. It might be.

Q. Ninety? A. It might be.

Q. One hundred years? A. It might be.

Q. One-hundred and twenty-five? A. I drop back on my statement that I have no limit to put on it but a conservative estimate would be thirty-two to fifty years.

Mr. Temple: Your estimate as to the life of a steel rail applies to the conditions of the South Dakota lines and the traffic on those lines? A. Yes, sir; that is what I understand we are talking about.

Mr. Kittredge: From what sources did you derive the information on which you base your opinion regarding the average life of a steel rail? A. From my personal observation and then from some degree of familiarity wth the literature of the subject contributed to by experts in Europe and America on that subject. One of the best evidences that I

have is this mile or two south of Sioux Falls. I think a quantity of that steel has already had twenty-three years' wear.

Q. Well, you don't know that, do you? A. I know it in this way, that the brand is the year 1875, and railroad companies don't keep steel stocked up. They keep it in use.

Q. Don't they keep steel on hand? A. Not in any great quantities except for repairs. They don't stack it from year to year—buy it ahead and not use it.

Q. They don't get a supply on hand, or anything? A. Oh, yes; they have a supply for renewals.

Q. They have to keep that on hand, don't they? A. Yes, sir.

Q. Large quantities of it? A. Yes; it is distributed like this rail to where it will be convenient when needed.

Q. You still want to be understood as contradicting the testimony of Mr. Earling, Mr. Truesdale, Mr. Harahan and Mr. Brown upon that subject—the life of a steel rail? A. As I have said, in South Dakota, that the rail in my judgment will last from thirty-two to fifty years before it is worn out, under this traffic.

Q. It might last longer? A. It might, yes, sir.

Q. So, as I understand it, you criticise Mr. Earling's testimony regarding the life of a steel rail, the amount of fuel consumed by locomotives, the renewal of ties and the cost of ties in South Dakota? Are those the four items which you criticise? A. Yes, sir.

Q. Are there any other items in the statements which you have criticised that you wish to criticise? A. I have been over all of the items; I think the direct examination shows that. That is my recollection.

Re-direct Examination by Mr. Null.

I call your attention to the testimony of Mr. Harahan in which the following question was asked him: "So that those relayers under the light traffic indicated by the showing of ninety-six tons to the train, and only one train each way a day, would last a long while?" And which he answers "No telling how long it would last." "It might last thirty years?" "Well, I don't know." Is that testimony in harmony with your understanding?

Mr. Kittredge: That is objected to as incompetent, immaterial and calling for the conclusion of the witness.

A. Yes, sir.

Mr. Null: I desire at this time to offer in evidence monthly statement of the performance of engines of the Chicago, Milwaukee and St. Paul Railway, James River Division, showing fuel expended, for the month ending February 27, 1898, the original of which being a part of the records of the railway company, we desire to make a copy of this statement and offer it in evidence as Exhibit 72.

FOLDOUT(S) IS/ARE TOO LARGE TO BE FILMED

H. W. SAWYER, recalled:

Direct Examination by Mr. Null.

Q. Mr. Sawyer, have you compiled a statement showing the rates on live stock in car loads between Sioux City, Iowa, and all South Dakota stations? A. Yes, sir.

Q. Have you the statement with you? A. I have.

Q. Let me see it.

(Paper here produced and marked by the special examiner Exhibit 73.)

Mr. Null: This paper marked Defendants' Exhibit 73 is the compilation you refer to? A. Yes, sir.

Mr. Null: I offer it in evidence.

Mr. Kittredge? That is objected to as incompetent and immaterial.

DEFENDANTS' EXHIBIT 73.

Table of rates in force on the lines of the Chicago, Milwaukee & St. Paul Railway Company's line as shown by their printed tariffs. Rates here given below are in cents per 100 lbs.

		Cattle.	Stock Cattle.	Hogs.	Sheep.
Sioux City to—					
Mitchell.....	137.6 miles	18	15	21	21
Sioux Falls....	90.6 miles	10.5	10.5	15	15
Chamberlain...	204.6 miles	22	19	25	25.5
Aberdeen.....	265.9 miles	25	20	28	25
Yankton.....	61.3 miles	12.5	10	14.5	14.5
Council Bluffs or Omaha to—					
Mitchell.....	292.7 miles	17.63		17.63	18
Sioux Falls....	245.7 miles	22		26	26
Chamberlain . .	359.7 miles	25		33	29.5
Aberdeen.....	421 miles	27.5		34	31
Yankton	216.4 miles	18		23.5	22.5

Mr. Null: This is compiled from the schedules as furnished to you by the railroad companies? A. That is compiled from the freight tariff No. 11,874, being the tariff of the Chicago, Milwaukee and St. Paul Railway Company giving the rates on live stock in car-loads between Council Bluffs, Iowa, Omaha and South Omaha, Nebraska, and stations in Minnesota, North and South Dakota, and from freight tariff No. 12,759 of the Chicago, Milwaukee and St. Paul Railway Company, being a tariff on live stock in car loads between Sioux City, Iowa, and stations in Minnesota and North and South Dakota.

Mr. Null: And this exhibit correctly states the rates as shown by the schedules you have referred to? A. To the points indicated, yes, sir.

Mr. Kittredge: Do the figures that you give in Exhibit 73 relate to inter-state business—do not all of the figures you have given relate to purely local or South Dakota business? A. No, sir.

Q. Sioux City is just over the line in the State of Iowa? A. Sioux City is, I believe, a little over four miles in the State of Iowa from the state line.

Whereupon further hearing was continued to 10 a. m., May 3, 1898.

May 3d, 10 a. m.

ALEXANDER KIRKPATRICK, being called as a witness on behalf of the defendants, was by the special examiner duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Kirkpatrick, what position do you hold? A. Railway Commissioner of South Dakota.

Q. How long have you held such official position? A. About a year and five months—four months.

Q. I will ask you if since this litigation has arisen, if you traveled over some of the complainant's railway in the State of South Dakota? A. The greater portion of it, yes, sir.

Q. And have you made investigation and inquiries in the matters relating to its construction and maintenance? A. I have, somewhat.

Q. I will ask you if you have observed the number of cattle guards on a certain portion of the complainant's railway? A. Yes, sir.

Q. What portion? A. Principally in the northern district—the northern part of the state, as well as on the line from Wolsey to Mitchell and Canton and Sioux Falls, and in the northern part of the state.

Q. Did you make a trip from Sioux Falls to Bristol, Bristol to Aberdeen, Aberdeen to Wolsey and count the cattle guards in the track? A. I did.

Q. How many did you find? A. Twenty-one is my recollection of it. I made a note of it as I went over the road—thirty.

Q. Thirty? A. Yes, sir.

Q. Have you observed the fences constructed by the company along its right of way, where its right of way is fenced? A. I have; yes, sir.

Q. State the kind of a fence it was? A. It was what is commonly known as a wire fence. It is constructed by nailing or stapling the wires on the posts. These posts are about a rod apart, ordinarily. Four wires to the fence with few exceptions.

Q. It is posts and wires, the posts a rod apart and about four wires? A. Yes, sir.

Q. It is uniform over the state? A. Practically so—yes, sir.

Q. How long have you lived in South Dakota? A. Since the 1st day of March, 1882.

Q. And what has been your occupation? A. Farmer.

Q. And since you have been in South Dakota have you constructed and maintained fences—have you? A. Yes, sir.

Q. Constructed of posts and wires? A. Yes, sir; that is the only fence.

Q. What kind of posts were these in the railway fence? A. Cedar, mostly.

Q. And what kind of posts in constructing fence? A. Cedar, mostly.

Q. And from your experience and observation of the durability of posts, I ask you to state what your evperience is with reference to the length of time that the posts will last in South Dakota—the cedar posts? A. There has been no fences in our locality, that is, in the locality in which I live, which as yet need to be replaced because of decay. There are fences in my neighborhood which I know of which I was present at the construction of which have been in a good state of preservation since 1884.

Q. So that the length of time a cedar post will last in South Dakota has not yet been determined by experience? A. Not in that locality, except that there are faulty posts occasionally which have to be replaced.

Q. And do you in the ordinary farm fence use as heavy posts as the railway company do in their right of way fence? A. No, sir.

Q. Nor do you use as many posts to the mile as they use? A. No, sir; not ordinarily—it depends.

Q. I will ask you if you have observed the number of ties to the rail at different points in the state upon the complainant's lines of road? A. I have.

Q. At what points particularly? A. At a great many points.

Q. What is the length of the rail found where you investigated that question? A. Twenty-eight and thirty feet with but few exceptions.

Q. What is the length of a rail—how many ties did you

find to a thirty-foot rail? A. From fifteen to seventeen—sixteen ordinarily.

Q. Did you observe the brand on the rails? A. I did; yes, sir.

Q. I will ask you if you have investigated the brands on the rails in the track in front of and extending north of passenger station at Sioux Falls? A. I have; yes, sir.

Q. What brand did you find upon those rails? A. I found that as to date they range from '72 to '79. They were different brands as to the manufacturer—North Chicago Rolling Mill, as I presume from the initials, more than the others.

Q. You found some with the name Cambria? A. Yes, sir.

Q. Did you observe the brands on the frogs? A. I did.

Q. What did you find? A. I found some of them branded '75—one, I believe, branded '75, and the other '79.

Q These frogs were in the track just north of the passenger station in the City of Sioux Falls? A. Yes, sir.

Direct Examination continued by Mr. Temple.

Q. How do the ordinary wire fences used on the fences in South Dakota compare in character and compare with the construction of fences along the line of the complainant's railroad? A. They are identical, with the exception that the railway company's fence are more solidly constructed, that is, more posts used and they are closer together.

Q. And would you say the railway fence would last longer? A. I did not.

Q. I say, would you say it? A. Yes, sir.

Q. What is the present condition of those ranch fences that were built in 1884, and to which you have referred? A. They are apparently in good condition. They are as serviceable as they ever have been.

Q. Do you recall at this time any particular piece of wire fence on the Milwaukee line or the North-Western line in this state which you have observed particularly? A. The only place I recollect is on the North-Western line near my home.

Q. How long has that fence been there?

Mr. Kittredge: Objected to—incompetent and immaterial.

A. To the best of my recollection ten years—in the neighborhood of that.

Q. How does that fence compare in material and manner of construction with the fences on the Milwaukee line? A. It is practically the same.

Q. Has this fence on the North-Western line been renewed or repaired since you knew of it? A. Only, I think, when a few of the posts have been burned away.

Q. What is its condition at this time? A. Good.

Q. From your experience and observation in the matter of these wire fences in South Dakota are you able to testify as to the average life of cedar posts used in connection with these fences? A. No, sir; I have no knowledge.

Q. And you have observed such posts for how many years? A. Twelve to fourteen years.

Q. And you have no knowledge of any that have had to be repaired in that time? A. No, sir.

Cross-Examination by Mr. Kittredge.

Q. Speaking of fences not being repaired, you speak of farmers' fences? A. Yes, sir.

Q. You have no knowledge of the repairs the railroad companies have been compelled to make on their right of way? A. No, sir; no other than as I have testified from my observation.

Q. And that was on the North-Western Railway? A. Yes, sir.

Q. You have no knowledge of the repairs the complainant company has made on the fences on its railway within the State of South Dakota? A. No, sir; I have not.

Q. You do not know about its fences—they are in a fair state of repair at the present time? A. Yes, sir.

Q. You have not had any experience in the matter of railway fences, have you? A. In building fences, do you mean?

Q. Yes; in maintaining or repairing them. A. Not any; no, sir.

Q. The only knowledge you have on the subject is the ordinary farm fences? A. Yes, sir.

Q. And your experience in that has extended over ten or twelve years, as I understand it? A. My observation and experience has extended over a period of twelve or fourteen years.

Q. Farmers' fence? A. Yes, sir.

Q. When did you examine the rails on the road? A. At various points on the lines at Sioux Falls, at Wolsey, at Redfield, at Aberdeen, at Egan, at Coleman and some intermediate points that I do not recall. Quite a good many.

Q. With the exception of the Sioux Falls station, have you made any inspection or examination of the rails on the complainant's line as the train would stop and you would be waiting to take the train? A. Yes, sir.

Q. At what points? A. At Wolsey and at Aberdeen, at Redfield and Sioux Falls, I believe, are the only ones.

Q. Those are the only two points? A. Except when stopping at stations I would examine it.

Q. Are those the only ones you have any recollection of which you noted? A. No, sir. I have recollection of what I noted at other stations.

Q. I understood you said the brand at Sioux Falls was '75 to '79? A. I said '72 to '79.

Q. You have no knowledge of the length of time those rails were in the track? A. No, sir.

Q. At any of these stations? A. I have not.

Q. Have you any knowledge of the construction or operation of railways in the State of South Dakota or elsewhere? A. I do not understand your question, Mr. Kittredge.

(Question read to witness.)

A. I have none except as I have gained by observation and inquiry.

Q. How long have you made such observation and inquiry? A. During the past year.

Q. Then prior to a year ago you had no knowledge whatever touching the construction and operation of railways in South Dakota? A. Only in a general way.

Q. What do you mean by a general way? A. The knowledge a man gains from observation and contact with men who have been in that business.

Q. Had you any knowledge of the matter of the operation and construction of railways—any further knowledge than a man might gain as he was traveling on the train? A. That is all.

Q. Prior to a year ago you made inquiries of matters in regard to which you have testified? A. No, sir.

Q. At what points did you count the ties and rails in the company's tracks? A. At the points I have stated—Aberdeen, Redfield, Wolsey and Sioux Falls.

Q. In what manner did you determine the length of the rail? A. I measured it.

Q. In what manner? A. In all cases except one with a tape measure—the ordinary kind.

Q. And at what place was that? A. At Aberdeen and Redfield and Wolsey.

Q. And at those three stations you measured it with a tape line? A. Yes, sir.

Q. And what length of rail did you find? A. Thirty feet ordinarily, except the nearer the station the shorter the rail—twenty-eight and thirty feet was the ordinary length.

Q. At the stations you have examined you found the ordinary common length of rail was twenty-eight feet? A. No, sir; I do not think that they predominate, although there were more than there was north of us.

Q. And you found under the twenty-eight foot rail from fifteen to seventeen ties? A. No, sir; from fourteen to sixteen.

Q. Under the twenty-eight foot rails? A. Yes, sir.

Q. Do you know how many rails there are in a mile if

the rails are twenty-eight feet long? A. I have not made the computation; no, sir.

Q. How many rail lengths did you go over and count ties at the Redfield station? A. I counted ties over about half a mile of track. Not the rails, as I did not measure them, not all of the rails on that length of track.

Q. How did you determine it was a half a mile? A. By estimating the distance from the depot to the mile post.

Q. Then you went over the piece of ground, over the track for a distance that you estimate would be a half a mile? A. Yes, sir; it was as much as that.

Q. Did you count up the number of ties in that distance? A. I counted the ties under each rail; yes, sir.

Q. Did you find any rails in that Redfield examination which had seventeen ties under them? A. Yes, sir.

Q. More than one? A. I think, yes, I think two or three —I did not make a note of the exact number; there were two or three.

Q. What were the width of the ties? A. I did not measue them. I should judge the surface of the tie was from four to six, possibly eight inches, in some cases.

Q. The number of ties under a particular rail depends on the surface or face of the ties, does it not? A. I did not observe that; no, sir.

Q. In what manner did you determine the number of cattle guards in the company's lines on the trip that you have mentioned? A. By counting them.

Q. Did you walk over the track? A. No, sir; I rode on the train.

Q. And where did you station yourself on the train? A. On the engine.

Q. All the way? A. No, sir; not all the way; on the engine part of the time and on the rear of the train the balance of the way.

Q. And you counted them as the train would pass? A. Yes, sir.

Re-Direct Examination by Mr. Temple.

Q. Is the Northwestern road on which you observed this piece of fence similar to the fence on the Milwakuee road in this state?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. It is; yes, sir.

Q. Is the ordinary wire fences used for ranch purposes in this state subject to any condition or influence affecting the life of the wire fence or its necessity for repair, different from the other fences on the Milwaukee line in this state? A. I know of none; no, sir.

Q. Well, is the wire fence used upon the Milwaukee lines of railroad in this state subject to any condition or influence affecting its life or necessity for repairs, different from those which affect the wire fences upon the ranches? A. No, sir.

Cross-Examination by Mr. Kittredge.

Q. Have you ever had any experience with railway fences to which you have testified? A. No, sir.

Q. How are you able to say the conditions are not different? A. From my knowledge and observation.

Q. You have not observed railway fences more than a year? A. Yes, sir.

Q. On the Milwaukee road? A. Mr. Temple was speaking of railway fences generally.

Q. Have you ever observed the Milwaukee fences for more than a year? A. Yes, sir.

Q. Have you made any observations other than as you passed along on the train? A. Not any.

Q. And all you observed then was that they were in good repair? A. Yes, sir.

Q. Did I understand you to say that all of the fences on the company's line were wire fences? A. I said with few exceptions.

Q. Have you made any particular examination of the character of the fences and the manner of construction? A. Yes, sir; I have.

Q. And where are the exceptions that you have mentioned? A. I do not recollect the exact point, but there are some exceptions in the southern part of the state.

Q. As a rule in the southern part of the state the fences are board and posts? A. I do not think that is the rule.

Q. There are a good many miles of fence constructed of boards and posts? A. I would not testify as to that.

Q. You have noticed a good deal of that? A. I have noticed some of that.

Witness excused.

And thereupon the taking of testimony in said cause was adjourned until the evening of the 13th day of May, 1898, at Washington, D. C.

Sioux Falls, S. D., May 20th, 1898.

The defendants not having taken any testimony at Washington, D. C., on May 13, 1898, the taking of the testimony on the part of the defendants was resumed at Sioux Falls, South Dakota, on May 20, 1898, at 3 o'clock p. m., by con-

sent of solicitors for both parties. The defendants appeared by T. H. Null, Esq., their solicitor; and the complainant appeared by A. B. Kittredge, Esq., its solicitor.

JOHN O'BRIEN, called as a witness on the part of the defendant, was duly sworn by special examiner to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. What is your occupation? A. Farmer at present.

Q. Have you ever been engaged in any department of railroad work? A. Yes, sir.

Q. In what department? A. Section foreman.

Q. For what company were you employed—by what company were you employed? A. Chicago and North-Western Railway Company.

Q. How many years did you work as a section foreman? A. In Dakota and Minnesota together—do you mean altogether?

Q. Yes, sir; altogther; A. About fifteen years.

Q. All of this time were you in the employ of the Chicago and North-Western Railway Company? A. All the time; yes, sir.

Q. How many years did you work for the North-Western Railway Company as section foreman in South Dakota? A. Pretty near twelve years.

Q. At what point were you employed? A. Ree Heights.

Q. During the entire twelve years? A. During the entire time.

Q. When did you begin there? A. I came there about the 15th or 20th day of July, 1880.

Q. About the time the road was constructed? A. When I come into Huron the road had not quite got to Ree Heights yet. About Ree Heights the section house was not completed for me to go and live in. The carpenters were at work on it.

Q How many miles was there in your section? A. At that time?

Q. Yes, sir? A. Twelve miles; I run from Ree Heights to Highmore. That is supposed to be twelve miles.

Q. How many men did you employ on your section? A. Those days when I came there, I had quite a crew. The track was new and they wanted to get it in good condition before winter set in, and I had about eight or nine or ten men.

Q. After the road was got into active operation, how many men did you usually keep in your section gang? A. Well, it depended on the traffic on the road a good deal; when there was a good many trains running, I had six men. When there were not so many trains running, the force was reduced. I could not just exactly recollect.

Q. When did you quit working for the North-Western Railway Company? A. About the first of July, 1892.

Q. And what were your duties as section foreman? A. Keeping the track in repair.

Q. Did you replace ties that were decayed? A. Yes, sir.

Q. And did you have charge of the work of replacing rails that required replacing? A. Yes, sir; when there was any to be replaced.

Q. Do you remember or can you now state the number of

rails that were replaced in that section during the time you had charge of it?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. I never renewed any rails or changed any rails only when I had broken rails. I had two broken rails during my time on the section.

Q. So that during the time you had charge of that section you only replaced two rails? A. That is all on the main track.

Q. On the main track? A. Yes; that don't mean side tracks.

Q. Where did you live since you quit the employ of the North-Western Railway Company? A. On my farm.

Q. Where is that situated? A. About three-quarters of a mile from town—from Ree Heighths.

Q. And have you observed the condition of the track and rails from that time to the present? A. Yes, sir; I have been back and forth over it several times.

Q. And have you been over that section recently—that section of the road? A. Not the full length of it.

Q. Have you been over any considerable portion of it? A. Yes, sir.

Q. When was the last time? A. Last Sunday for one time.

Q. Are you able to state whether the rails in that section that are there now are the same that were there when you had charge of the section?

Mr. Kittredge: Objected to as incompetent and immaterial.

Q. Generally speaking, are the same rails there now as when you had charge of the road?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. They made a few changes on account of broken rails but otherwise it is the same.

Q. And what is the present condition of the rail? A. It is good.

Q. Are you able to state at this time anything about the number of ties that were put in the track? A. No, sir; I would not state as to how many ties I put in every summer I was on the track. For one reason, I never kept any copy of the report I made out and sent to the different road-masters I worked under during my time; I merely made out the report and sent to the road-master for so many ties, and I remember that sometimes I got the amount, and sometimes I got a few less, just accordingly as they came out in the cars.

Q. So you are unable to testify now as to the number of ties placed in there during the several years you were there? A. No, sir; I would not; as I kept no copy of it.

Cross-Examination by Mr. Kittredge.

Q. Do you know how many rails have been replaced from the time you left the employ of the North-Western Road, until to-day? A. No, sir.

Witness excused.

Adjourned until 9:30 a. m., May 21st, 1898.

May 21, 1898, 9 a. m.

W.B. CRONK, being called as a witness on the part of the defendants, was by the special examiner duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Where do you reside? A. At Huron, South Dakota.

Q. What is your business? A. Clerk to the superintendent.

Q. By whom are you employed? A. The Chicago and North-Western Railway Company.

Q. Who is the superintendent of the Dakota Division of the Chicago and North-Western Railway Company? A. Mr. J. S. Oliver.

Q. How long have you been engeged in the capacity of clerk to the superintendent? A. Since 1884—June, 1884.

Q. And whereabouts are your headquarters located? A. At Huron, South Dakota.

Q. What portion of the lines of the Chicago and North-Western Railway Company is included in the division of which you say Mr. Oliver is superintendent? A. The line from Tracy to Pierre; Hawarden to Oakes; from Brookings to Gettysburg, by way of Watertown; from Doland to Croton, and Yankton to Centreville.

Q. That is, all of the Dakota lines of the Chicago and North-Western Railway Company are included in the division of which Mr. Oliver is superintendent? A. All of the lines in Dakota—yes, sir.

Q. How many miles are there in South Dakota? A. About 710 miles.

Q. And how many miles of side-track? A. There is sixty-eight miles of side-track—that is, on the whole division. Part of that is in Minnesota. I could not say from here what part was in Minnesota.

Q. A small part of the sixty-eight miles of side-track is in Minnesota? A. Yes, sir. I could not say what part.

Q. And you have been employed at Huron as clerk of the superintendent since 1884? A. Yes, sir.

Q. What are your duties as clerk of the superintendent? A. Keeping of the accounts, making a portion of the pay rolls.

Q. Do you keep the account of the ties and rails used in replacement and repairs? A. Yes, sir.

Q. And have you kept such account since 1884? A. Yes sir.

Q. I will ask you if you have under your control records by which you could tell us the number of ties used in the replacement in the lines of the Chicago and North-Western Railway Company in the State of South Dakota, beginning with the year 1889, and up to the present time? A. Yes, sir.

Q. Can you give it prior to that time? A. No, sir.

Q. Please state why. A. The records were destroyed prior to 1889 on account of accumulation.

Q. I will ask you to state the number of ties used for replacement and repairs during the year 1889 on the Chicago and North-Western Railway in South Dakota?

Mr. Kittredge: Complainant objects to such testimony for the reason it is incompetent and immaterial.

Q. As I understand the question, it is in South Dakota?

Q. Yes. A. The figures we have are for the whole of the Dakota Division lines together.

Q. How much road does that include outside of South Dakota? A. About sixty-one miles.

Q. That would be the track running into North Dakota at Oakes? A. Yes; I include that in here, but it includes principally the line from Tracy to the Minnesota state line.

Q. That is, it includes the line from Tracy to Elkton? A. Yes, sir.

Q. Now, the figures you are about to give us cover all the Dakota lines and the lines to Oakes and the line from Elkton to Tracy? A. Yes, sir.

Q. What would be the total number of miles of line, including those two? A. 771 miles.

Q. And how many miles of side-tracks? A. Sixty-eight.

Q. Now, you may state how many ties were used in repairs and replacement during the year 1889 in this Dakota Division, and you may further state the number each calendar year from 1889 to the present time?

Mr. Kittredge: Complainant objects to such evidence for the reason it is incompetent and immaterial.

A. In 1889..... 29,025
In 1890..... 32,850
In 1891..... 51,625
In 1892..... 61,275
In 1893.....107,000
In 1894..... 97,500
In 1895..... 49,500
In 1896..... 91,600
In 1897..... 94,500

For the year 1898 we have received 113,150, and we expect to receive between 12,000 and 15,000 more.

Q. These were the ties that were received for these different years? A. Yes, sir.

Q. Now, these ties were received and used in repairs and replacement on the Dakota Division? A. Yes, sir.

Q. During the years which you have given the number? A. These were the ties that were received for these years. A part of them might be carried over and used the following year, but they represent the total number of ties received and laid during that time.

Q. All the ties that were actually laid in the track were taken from the ties which you enumerated as being the ties received? A. Yes, sir.

Q. There were no other ties laid in the track? A. None that I know of, and I would be apt to know.

Q. These figures which you have given, you have taken from the records of the superintendent's office at Huron, have you? A. Yes, sir.

Q. Records kept by yourself? A. Yes, sir.

Q. Where are those ties purchased; that is, in a general way? A. Well, the cedar ties are purchased in Michigan; the oak ties in Wisconsin usually—a number of years ago we received oak ties from some point in Illinois, I think. I do not remember the year. A majority of the oak ties come from Wisconsin.

Q. And where do you receive them upon your line; that is, at what point do they first reach the North-Western line—the cedar ties? A. They are loaded on the North-Western line on what we call the Peninsular division at various places, and then are carried to Green Bay, transferred there to the Green Bay road and hauled to Winona, and from Winona west and distributed by the Dakota lines.

Q. How far is Winona from Huron? A. I cannot remember that from here. I could not tell.

Q. You do not remember the distance from Tracy to Winona? A. I think it is 250 miles, and it may not be. I do not remember the distances on other roads.

Q. This material, as I understand it, is shipped to the superintendent in the first instance, is it? A. Yes, sir.

Q. And charged to him by the company—charged to his division? A. Yes, sir.

Q. And credited back as reported used in the tracks? A. Yes, sir.

Q. And do these accounts pass through your hands? A. Yes, sir.

Q. I will ask you to state at what price these ties are charged to the Dakota Division of the Chicago and North-Western Railway Company?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. Take it for instance the current year?

Q. Yes.

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The seven-inch cedar ties—I cannot recollect whether the price of the seven-inch ties is 21 cents without the loading and inspection or with it, and then there is the freight charge on the Green Bay road, from Green Bay to Winona, to be added to that.

Q. During the time that you have been at Huron, as clerk to the superintendent, has there been any rails used in repairs and replacement? A. Yes, sir.

Q. What kind of rails are relaid upon the tracks of the North-Western in South Dakota? A. They are rails that have been taken from other portions of the track.

Q. In states other than South Dakota? A. Yes, sir; in Minnesota, usually.

Q. And are they iron or steel? A. Steel. The rails that have been used, I understand you, rails that have been used for repairs in Dakota on main track?

Q. Yes, sir. A. Steel.

Q. Are all the lines of the company in South Dakota laid with steel? A. The main track?

Q. Yes, sir. A. No, sir.

Q. What lines are laid with steel and which with iron? A. They are all laid with steel except the line from a little north of James Valley Junction to Columbia, which was originally laid with fifty-pound iron.

Q. What weight of steel was used in the original construction in South Dakota? A. Fifty and fifty-six pound.

Q. When were these lines constructed? A. Well, that is a question I cannot answer absolutely from memory. I can say the first line was built in Huron in 1880, extended to Pierre that same year; the south line was built in 1883, that is to say, the Hawarden line. I could not state positively the years the other lines were built.

Q. Can you state about when the line from James Valley Junction to Columbia was built? A. It is my recollection that that was built in 1881, the year following the time line was built to Huron and Pierre. That is, to Columbia, where they stopped for a number of years.

Q. And has any portion of the lines in South Dakota been relaid with iron or steel since it was first constructed

other than the ordinary and casual repairs; that is, has there been any systematic relaying of the lines? A. There has been nothing but repairs—what we call repairs. No lines have been laid with new steel. For instance, last year there was a portion of the Jim River line relaid with a second quality of steel, something like three miles, taken from other divisions.

Q. Was that three miles a continuous string of track? A. That was a continuous string; yes, sir.

Q. Whereabouts was that? A. It commenced about one mile north of James Valley Junction. That was relaid; taking up the fifty-pound iron for the purposes of using the better portion of that, here and there, on the balance of that line which was laid with iron.

Q. Can you state about the amount of iron and steel that has been used to replace and repair in South Dakota up to the present time? A. This would have to be from memory. I did not take any data. I can say this, that the line from Tracy to the state line, which is about forty-six miles, has since the beginning, since the line was built, been relaid and the steel that was taken up on this line, this forty-six miles, has been used in repairs and replacement on the balance of the line, and also in the construction of side-tracks. In addition to that we have received some, I could not say how much, from other divisions.

Q. Not a great deal? A. I could not say it was.

Q. The rails for replacement and repairs have been supplied largely by this forty-six miles that was relaid? A. Yes, sir; to a considerable extent. We received rails from the east to relay this part and then took the rails from this line, from Tracy to Elkton, to lay on the balance. In addition we have received several shipments of rails outside of that, but very little.

Q. Do you know the price at which the Dakota Divisions are charged by the Chicago and North-Western Railway for these relayers?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. The price varies. Each year it is a different price. It runs anywhere from thirteen to a little over thirty dollars a thousand.

Q. A ton you mean? A. Yes, sir; gross ton.

Q. What was it the current year?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. This, you understand, is the price for second quality steel—thirteen dollars a ton.

Q. When you say "second quality," you mean steel that has been used heretofore, I take it? A. Yes, sir.

Q. I notice that for the year 1893 you stated the number of ties received there was 107,000, and 1894, 97,500; was there any special occasion for extraordinary tie replacement during those two years? A. Yes, sir; the ties on the Groton line—that line which was laid with hemlock ties—a good many were found to be entirely rotten and a great many of them had to be replaced. Where cedar ties have been used they have lasted longer.

Q. And what class of ties does the North-Western use now in their main line track? A. You mean what kind of ties are sent to us?

Q. Yes, sir. A. We have received cedar and oak ties.

Q. I will ask you to state, if you remember, whether there has been any extensive replacement from 1884 to 1889? A.

I do not know as I understand that. The numbers show for themselves the extent.

Q. I say take it for a period of time from 1884, when you commenced at Huron, up to 1889, when your figures begin? A. That would have to be from memory entirely, and it is a good while to remember. My memory is that the tie replacement was small during those years.

Cross-Examination by Mr. Kittredge.

Q. You have nothing to do with the actual replacement of ties or rails in the company's tracks, have you? A. No, sir.

Q. And have no personal knowledge of the condition of the ties and rails? A. No, sir.

Q. You have no personal knowledge of the condition of the ties at the commencement of the year 1889? A. No, sir.

Q. And you have no personal knowledge of the condition of the ties to-day? A. No, sir.

Q. Did you in your direct examination give the cost price of the ties to the North-Western Company? A. I stated the price the ties were invoiced to us from the Peninsular Division.

Q. That does not include the cost of transportation? A. I also stated that to be added to that cost price, which I could not determine within a few cents, was to be added the cost of transportation over the Green Bay road, from Green Bay to Winona.

Q. That don't include the cost of transportation from Winona to Huron, which is your headquarters, and to other points on the line were these ties are used? A. No, sir.

Q. These second grade rails which you have spoken of are charged to you at a valuation? A. Yes, sir.

Q. And that charge does not include the cost of transportation? A. No, sir.

Q. Or handling? A. It includes the cost of loading them in the cars usually.

Q. It does not include the cost of transportation when started on the cars to your headquarters of when used on your division? A. No, sir.

Q. And it does not include the cost of distribution or handling them after you receive them? A. No, sir. Simply the cost of the rail as invoiced to us.

Q. And they are invoiced to you at a valuation? A. Yes, sir.

Q. And are second grade rails? A. Yes, sir.

Q. And you have no personal knowledge of the condition of the rails on the North-Western Division at the present time? A. No, sir.

Re-direct Examination by Mr. Null.

Q. Mr. Cronk, you have rails on hand for repairs distributed over the system, have you? A. Yes. sir.

Q. And these forty-six miles which were taken up with what few you received from other sources cover the rails actually placed in the track and those on hand as well, does it not? A. I could not say what we had on hand after the road was built. As I have stated, this amount has been relaid in South Dakota, and also used in the construction of side-tracks, and remain on hand, I believe.

Q. Now, when these ties are distributed to the road-masters and section foremen, the section foreman or road-master reports to your office, do they not, the use made of the ties? A. Yes, sir.

Q. And these reports and accounts pass through your hands? A. Yes, sir.

Q. And have you inspected that record and made some comparison of it with the record of ties received which you have stated here? A. Yes, sir.

Q. And do they correspond? A. They do, very closely, so far as I was able to ascertain. They should correspond exactly between a limited number of years. That is to say, in the year 1897, we received 97,400 ties; a portion of these ties would be left over and put in this year.

Q. But for a series of years they would correspond very closely? A. Yes, sir.

Q. You came here in obedience to a subpœna from the United States Marshal? A. Yes, sir.

Re-cross Examination by Mr. Kittredge.

Q. Are you able to state the number of ties that were on hand at the headquarters of your division or upon the South Dakota lines at the commencement of the year 1889? A. No, sir.

Re-re-direct Examination by Mr. Null.

Q. Just describe the manner in which a requisition for ties is made and by whom it is made and when? A. The roadmasters make their requisitions after the inspection of the tracks in the fall. That is taken to the superintendent and made by him on the general office in Chicago.

Q. And the ties to fill out that requisition are furnished the following spring? A. Yes, sir.

Q. How many miles of track is there from James Valley Junction? A. I am pretty sure it is ninety-two miles.

(Signed) W. B. CRONK.

Thereupon the taking of testimony in said cause was adjourned to May 24, 1898, at 10 o'clock a. m., at Chicago.

Chicago, May 24th, 1898.

J. B. MOLL, being called as a witness on the part of the defendants, was by the special examiner first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. What is your relation with the Chicago, Milwaukee and St. Paul Railway Company? A. I am general roadmaster of the Chicago, Milwaukee and St. Paul Railway Company.

Q. Are you able to state the wages paid to employes of your department? A. Generally, yes, sir.

Q. What particular department do you have charge of? A. I have charge of the track department.

Q. And the section foremen and section men are under your direction, are they? A. Yes, sir; under my gen direction.

Q. Are you able to state the wages paid them? A. Yes, sir.

Q. You may state them, please? A. The wages of section laborers is and has been for some time $1.10 per day; the wages of section foremen is $45 per month.

Q. This is in South Dakota you speak of? A. Yes, sir.

Q. What is the pay of the roadmaster? A. The pay of the roadmaster is $100 a month, except in instances where a new roadmaster is promoted from section foreman; then for a short time he receives $75, $90, and then $100.

Q. Do you employ extra gangs at times on the lines in South Dakota? A. We do.

Q. And what wages are usually paid them? A. The usual pay is $1.25 per day for the laborers, and the foreman of the gang from $55 to $75 per month—average probably $65.

Cross-Examination by Mr. Kittredge.

Q. The figures you have given regarding the section foremen in South Dakota is the general wages? A. Yes, sir.

(Witness excused.)

H. R. WILLIAMS, being called as a witness on the part of the complainants, was by the special examiner first duly sworn to testify the truth, the whole truth, and nothing but the truth, and testified as follows:

Direct Examination by Mr. Null.

Q. Mr. Williams, what is your relation with the Chicago, Milwaukee and St. Paul Railway Company? A. At the present time I am general superintendent.

Q. Are you familiar with the wages paid to certain employes of the company in South Dakota? A. Yes, sir.

Q. What department? A. Well, practically all of the operating departments that are located out there.

Q. The train men? A. Train men.

Q. And station men? A. Yes, sir.

Q. I will ask you to state generally what the wages of train men and station men are? A. Well, the passenger train men on runs of 133 miles or less are paid $90 per month for the conductors, $50 for the baggage men and $45 for the brakemen. That covers a calendar month, and on runs of 133 miles or over the passenger train men are paid

$125 a month for the conductors, $55 a month for the baggage men, and $50 a month for the brakemen. The freight train men, the way freight men—which are the men who do the peddling along at stations—the conductors get $3.15, and the brakemen $2.15 for 100 miles or ten hours' work.

Mr. Kittredge: That is $3.15? A. $3.15, yes, sir—the through freight runs—which mean those men who do not do any peddling get $3 and $2 respectively.

Q. Per hundred miles? A. Per hundred miles on work trains, they get $3.20 and $2.20 respectively, per day.

Q. When the work does not amount to 100 miles in ten hours, what is the rule for determining the compensation? A. If they do not make 100 miles in a day, they get paid for it anyway, if you take them out, no matter if they only made five miles.

Q. What would be the pay of a passenger conductor who runs from Sioux Falls to Aberdeen? A. $125 a month.

Q. He works how many days in the month? A. He works every day except Sunday.

Q. What is that distance, approximately? A. Well, it is about 266 miles.

Q. And over that same run it would require two freight crews? A. Yes, sir. One crew would run between Aberdeen and Mitchell, and would get pay for 128 miles—that is, twenty-eight miles more than a day's work, and the man who made the 138 miles to Sioux City would also get thirty-eight miles for the day's work proportionately figured up.

Q. About how many miles does the passenger conductor on the run mentioned make in the course of a month for his month's salary? A. I could figure that out in a minute. It is betwen 4,600 and 4,800, according to the number of working days in the month.

Q. And about how many miles would a freight conductor make to earn his month's wages? A. That depends entirely on the amount of business that there is on the road. We aim to keep the crews reduced so that the freight crews will make twenty-six days to the month—that is, every working day, 100 miles to the day.

Q. The passenger conductor, as I understand it, would make 4,600 to 4,800 miles for $125? A. Yes, sir.

Q. And the baggageman and brakeman on the passenger make about the same for his month's pay? A. They go together—they run in crews.

Q. Are you familiar with the locomotive department? A. Yes, sir; I know the rates and wages of engineers.

Q. What is the compensation paid for engineers? A. For what we call a short day, that is, runs under ninety miles, they get $3.50, for runs over ninety miles they get $3.70, for 100 miles and more proportionately, at the rate of ten miles an hour or over—mileage—whichever will make the most to them. That is for an eight-wheel engine.

Q. Is there a difference? A. Yes, sir.

Q. What is that difference? A. An engineer running a ten-wheel engine would get $3.85 in the latter instance, and $3.65 in the first instance that I mentioned.

Q. Is the pay of the passenger and freight engineer the same? A. Yes, sir.

Q. Measured by the miles? A. Measured by the miles; yes, sir.

Q. What is the pay of the fireman? A. The fireman, in the first case, that is, on the short run, gets $2.10, and on runs of 100 miles he gets $2.20, I think it is. I have a note here which shows just what it is, $2.20 and $2.40—the latter is for ten-wheelers.

Q. What is the pay of the employes about the round house? A. Well, I don't know; I am not familiar with that; there are different rates for different classes of work; I am not fully posted on the rate on that.

Q. Can you state the salary of the employes that are commonly called wipers? A. I think as a rule they get about $1.25 a day.

Q. What is the compensation paid to station agents? A. That varies with the importance of the station.

Q. It is measured somewhat by the volume of business at the station? A. Yes, sir; that is intended to be the basis—the importance of the point. It runs from $40 to $100 per month.

Q. What is paid to the telegraph operator? A. Well, from $40 to $60.

Q. In many cases where the station is light, the agent performs both duties? A. Yes, sir.

Q. Of agent and operator? A. In the most of the cases —that is, for the average country way station.

Q. And he receives a salary varying from $40 to $100? A. Yes, sir; at those small stations we also furnish him with house rent—the rooms over the depot.

Q. That is in addition to their pay? A. That is in addition to their pay, and he also gets his fuel.

Q. What is the compensation of the Division Superintendent? A. Well, I do not know as I remember what that is; I think it is about $175 per month.

Q. There is but one in South Dakota? A. That is all; there are others that reach in a little ways, but only one is really located in South Dakota.

Q. How many miles of track has he under his supervision? A. It is 317 miles.

Cross-Examination by Mr. Kittredge.

Q. When did you become general superintendent? A. On the first of April, this year.

Q. Whom did you succeed to that position? A. Mr. W. G. Collins.

Q. What position does he now hold with the company? A. General manager.

Q. And Mr. Collins succeeded whom as general manager? A. Mr. Earling.

Q. And Mr. Earling holds what position with the company? A. Second vice president.

Q. Where were you located, and what was your position prior to that time? A. I was assistant general superintendent, located at Minneapolis.

Q. What were your duties in that position? A. I had general charge of the operation and track in what we call the Northern District, which comprises Northern Iowa, Minnesota, North Dakota, and part of South Dakota and part of Wisconsin.

Q. How long have you been connected with the Milwaukee road in different capacities? A. Since the first day of January, 1867.

Q. Since the first day of January, 1867? A. Yes, sir.

Q. Are you familiar with the lines of the Chicago, Milwaukee and St. Paul Road in the State of South Dakota? A. Yes, sir.

Q. Do you know the conditions there—physical conditions, to-day? A. Yes, sir.

Q. Do you know the conditions of the ties and track? A. Why, yes; as close as a man can that has not gone and looked at each individual one himself.

Mr. Null: Do you make him your witness for this purpose?

Mr. Kittredge: Yes, sir.

Q. You may state it? A. It is good.

Q. The condition of the ties? A. Yes, sir.

Q. And the condition of the rails? A. Good.

Q. What motive power has the company in use in the State of South Dakota over its lines? A. You mean the size of it?

Q. Yes, sir. A. Well, it is largely what we call 16 by 24, the dimensions of a cylinder, eight-wheel engines. Some 17 by 24, and on the H. & D. Division—between Big Stone and Aberdeen, we use ten-wheel engines, which are 19 by 26.

Q. Is the condition of the ties and rails and road-bed of the company's lines in South Dakota such that the company can safely use its largest locomotives upon such lines? A. Yes, sir.

Re-direct Examination by Mr. Null.

Q. Can you state the weight of the ordinary eight-wheel engine in use in South Dakota, approximately? A. No, sir; I do not know as I can; I never inquired into it exactly. I always size them up by the size of the cylinder.

(Witness excused.)

D. J. WHITTEMORE, recalled on the part of the complainant in rebuttal:

Direct Examination by Mr. Kittredge.

Q. Mr. Whittemore, you testified early in the hearing of this case, did you not? A. Yes, sir.

Q. The defendants offered in evidence that portion of a certain report made by the directors of the Chicago, Milwaukee and St. Paul Railway Company to its stockholders relating to the cost of the construction of the line from Minocqua to Star Lake, on the Wisconsin Valley Division; you may state through what sort of a country that line is constructed? A. It is a line running through a somewhat timbered country, located where considerable standing pine is found. It is somewhat knobby. The line was located so we could get the cheapest line it was possible to build in that country. The clearing was made about fifty feet wide and the road-bed was built as narrow as practicable and was about twelve feet wide on the top. A large amount of the ties, telegraph poles and timber for culverts and bridges was got from the right of way or from adjacent land, without cost to the company—that is, other than the making. Nothing was spent for right of way, and at the time it was constructed, at the time that report was made, I believe the year following its building, no buildings were constructed on the line. The rails used were the sawed, repaired rails, mostly fifty-six pound steel rails. There was a mile or so of iron laid, and about three miles of sixty-pound sawed steel; what we would call the steel when repaired at the shop was usable in such a line.

Q. Was any equipment included in the cost of this road and report? A. I could not say. I made no analysis of what was reported. The mechanical work of building the line—the engineering—was done in my department. The track was laid by our company through its superintendent's department, and the other material furnished by my department. Therefore, I could not compare or state what was charged up to the building of that line.

Q. The defendants also offered in evidence certain por-

tions of the directors' report to the stockholders of the Milwaukee company relating to the cost of the construction of second tracks; were those second tracks constructed under your direction? A. Yes, sir—under my general direction.

Q. Under your general direction? A. Yes, sir.

Q. You may state the cost of constructing a second track as compared with constructing a first track. A. That will vary according to the character of the work—that is, according to the dimensions of the work. Many conditions you cannot see. We can select portions of our line of double track that would cost one-half what it will cost on the average of that line elsewhere. I wish to explain myself, so there can be no question about it While we now grade our lines on embankments at sixteen feet road-bed, many of our lines grade more than that—some of our lines will not grade more than fifteen or fourteen feet wide—I am taking it at fourteen feet, an embankment fourteen feet wide on top, to grade a second track alongside of it—at the standard distance of thirteen feet center, will require but seventy per cent. of the earth to make the embankment for a second track, that may be required for a single track when the bank is three feet high. If the embankment is four feet high, to grade a second track it takes but sixty-five per cent. of the material, and six feet high, 57 per cent., at eight feet high, only 50 per cent., and at ten feet high, 45 per cent., so that you can see according to the height the percentage varies in the amount of work required to be done in grading the road for a second track. Second track requires less grading than for a single track, and from a three-foot embankment, to ten feet high, it requires only from 70 per cent. in the first instance to 45 per cent. in the last instance; then, again, an embankment ten feet high on a single track will require more

length of culverts. The culvert would be forty-six feet long for single track, but you have got to add thirteen feet to the single track, making it thirteen feet longer. In building pile bridges four piles will be the piling for a single track in each bent, while seven piles will build it for a double track, and thus it follows through in those items —constantly less than to build a single track—less quantity.

Q. In the construction of a second track is it necessary to secure any additional right of way? A. Ordinarily it is not necessary to buy any right of way.

Q. State the cost of laying of ties and of rails in the second track as compared with the cost of laying it in the original? A. It costs considerably less, how much I cannot say.

Q. You may explain why it costs considerably less? A. The reason is, you can run the material right alongside of the track and dump it at the place without hauling it forward.

Q. In the report referred to, made by the directors to the stockholders regarding cost of second track, is any equipment included? A. That I could not say. Mr. Winne can testify to that; I cannot.

Cross-Examination by Mr. Null.

Q. Mr. Whittemore, how much of an embankment would be made in a grade which would average four yards to the foot? A. Four cubic yards to the foot?

Q. Yes, sir. A. That would be a matter of calculation. You mean for a fourteen foot road-bed?

Q. Yes, sir. A. That is about a five-foot bank.

Q. Are the embankment on the road-bed in South Da-

kota fourteen feet wide on top? A. It was originally constructed, I think, fourteen feet wide, that is at the sub-grade. Of course, when it is raised by surfacing to the top of the ties, two foot less in width, measured at that point.

Q. But the calculation is that the general grade is fourteen feet wide? A. At the sub-grade, that is, nine inches below the top of the ties—that is to say, I think the Dakota lines are built that way. I know we established them fourteen feet wide; since then there has been a great deal of work done, and I do not know what the condition is now.

Q. You had supervision of the engineering work at the time these lines were constructed? A. Yes, sir.

Q. And how was the line of the road established with reference to the cut and fill? A. We paid no attention to that. It was mainly an embankment. We had to keep out of the snow, and in the construction of it we kept the grade so there was always a preponderance of embankment.

Q. Upon a level plain, how high would the bank be above the plain? A. On a level plain, it should be three feet when it is perfect. You would want it three feet if you wanted to keep out of the snow.

Q. So the tracks are located about three feet above the level on the level? A. It might average that—there would be places five or six or seven feet fill, and other places you would just skim along the ground, but it is intended, taking it perfectly level, you would want about a three-foot bank.

Q. Have you in your office a diagram or cut of the original rail sections of the sixty-pound steel which was manufactured about 1877 and used in your line? A. Sixty pound steel?

Q. Yes, sir. A. I think I may have; I cannot tell. I do not know whether I have it for 1877.

Q. Was that rail section designed by you? A. I think it was; I think most of the rail sections we have used have been designated by me, except one.

Q. Have you a diagram of the sixty-pound rail which was used in Dakota in the construction of these lines? A. I cannot say. I could not tell it by years without further reference. We have them as templets cut out of brass; I would have to look through those and see what have been saved.

Q. Is there any difference—material difference—in the sixty-pound section from 1877 to 1883? A. Very little difference in those years, I think.

Q. Can you produce a diagram of the sixty-pound section between those dates? A. Yes, sir; I cannot say I can, but I will if I can find them.

Q. And also of the fifty-six pound? A. Yes, sir; if I can find them. Whatever I can find of those. I do not think they are preserved as drawings at that time, but they may be in the form of these templets cut from brass.

Q. Is your company now using a rail section that you designed? A. Yes, sir; that is, they are using two or three of my designs, and one of what is called the standard—American Society's design, which approximate very closely to mine.

Re-direct Examination by Mr. Kittredge.

Q. Mr. Whittemore, in the construction of second track would it be necessary to build any more stations along the line of such track? A. No, sir.

Q. How would it be in regard to large bridges, such as cross the Missouri and Mississippi rivers—would it be necessary to spend any money on bridges in the construction?

A. The way we have operated that matter, say in Minnesota, is to run one track into the other, a double line of rails. Of course you cannot go in opposite directions the same time on the bridge. That is done, but it don't double-track the road.

Q. In case the second track is constructed, would the company, of necessity, be compelled to secure additional terminal facilities? A. No, sir; it rather relieves them.

Re-cross Examination by Mr. Null.

Q. Does the company own the bridge over the Mississippi river at Savanna? A. Yes, sir.

Q. And at McGregor? A. Yes, sir—at LaCrosse, and a joint interest in the bridge between Minneapolis and St. Paul and one at Mendota.

Q. In the construction of the second track, of course the expenses of procuring the ties and rail material would be identical with the original construction, would it not? A. Buying and purchasing?

Q. Yes, sir. A. Yes, sir: in that case.

(Witness excused.)

W. N. D. WINNE, being recalled on the part of the complainant, in rebuttal, testified as follows:

Direct Examination by Mr. Kittredge.

Q. Mr. Winne, you testified before in this case? A. Yes, sir.

Q. During the last few years the complainant company has constructed several miles of what is called second track, has it not? A. Yes, sir.

Q. Was any additional equipment purchased by reason of such construction? A. No, sir.

Q. Not long ago the company constructed a piece of track from Minoagua to Star Lake on the Wisconsin Valley Division. Was any additional equipment purchased on account of that logging line? A. Not especially for that line, no, sir.

Q. Have you with you the report of the year 1897, of the directors of the company to its stockholders? A. Yes, sir.

Q. Will you produce it? A. I will, sir—that is the report.

Mr. Kittredge: I offer in evidence "Exhibit 74" being page 35 of the report of the directors of the company to its stockholders for the year ending June 30, 1897.

EXHIBIT 74.

EQUIPMENT IN SERVICE JUNE 30, 1897.

Standard Gauge.

Locomotives		823
Passenger cars		410
Sleeping cars		53
Parlor cars		16
Dining cars		8
Baggage, postal, mail and express cars		282
Freight Cars—		
Box cars	18,273	
Stock cars	2,416	
Flat, coal, ore and dump cars	5,779	
Refrigerator cars	474	
		26,942
Caboose cars		487
Wrecking, tool cars, etc		73

Narrow Gauge.

Locomotives		7
Passenger cars		3
Baggage, mail and express cars		6
Freight cars—		
Box cars	203	
Stock cars	59	
Flat cars	50	
		312
Caboose cars		5
Total		29,427

At the close of the year ending June 30, 1896, a shortage of three locomotives and 567 cars was shown by the inventory of equipment.

During the present year, eight small locomotives, unfit for further service, were scrapped; and operating expenses were charged with the cost of eight new standard locomotives to replace them, making a total shortage of eleven locomotives. Five locomotives have been built or purchased during the present year for replacement. The amount required to replace the remaining shortage of six locomotives —$60,000—is shown in the account of replacement fund for locomotives, on page 22 of this report.

During the present year, cars of all classes to the number of 340 were destroyed—seven by fire, 203 by wreck on our own and other roads, and 130 old cars of small capacity taken down as unfit for further service. 178 cars were built for replacement—comprising two postal, ten caboose and one hundred and sixty-six coal cars. At the close of this fiscal year, June 30, 1897, there existed a total shortage of 729 cars—comprising two passenger, one hundred and eighty-six box, 346 stock, one hundred and eighty flat and coal, and fifteen refrigerator cars. The amount required to replace the 729 cars, and four sleeping cars still serviceable, but which must be replaced by cars of modern pattern—$371,532—has been charged to operating expenses, and stands at the credit of replacement fund for cars, on page 22 of this report.

Q. Defendants, in their testimony, introduced certain annual reports purporting to give figures relating to the cost of supplies and materials of all sorts. Did those figure include freight or cost of transportation? A. There is no charge for freight on the lines of the company for any material used in the operation of the road.

Q. And none given in such reports? A. No, sir.

Q. The figures given therein refer to the cost of such materials delivered at the company's line? A. Yes, sir.

Q. The defendants offered in evidence certain portions of Exhibit . You may state in what manner that exhibit was prepared, and make any statement that you wish regarding the way that account was kept as regards the cost of any particular piece of work being aggregated in such account? A. The account was not kept with a view of showing the cost of any particular part of the work. It was a running account of what was expended. The labor and material were charged from the monthly reports. It would be impossible to pick out from that account the cost of doing any particular work on the line.

Q. What do you say about the cost of track laying? A. It is impossible to pick out the cost of track laying from that account. Part of the amount paid for track laying may be designated in that account, but a large part is probably not so designated. It went in with other labor.

Q. Defendants offer in evidence page 71 of the '95 annual report of the company to the commissioners relating to the supplies of fuel in Exhibit . You may turn to such exhibit and state regarding it. A. I have page 71 of the report here for the year ending June 30, 1895. It shows the tons of rails and the new ties laid during the year, and the consumption of fuel by locomotives during the year, apportioned to South Dakota on the basis of miles of road in the state compared with the total miles of road in the system, that is to say, eighteen per cent. of the total tons of rails and number of ties and fuel consumed were allotted to South Dakota.

Q. You may state the aggregate number of tons as shown

by that report? A. The tons of coal consumed in South Dakota shown by this report as apportioned to South Dakota is 173,472 tons.

Q. Defendants also offered in evidence pages 43 and 45 of the 1897 report to the Commissioners of South Dakota, being Exhibits . You may turn to those exhibits. A. I have them here, sir.

Q. And state regarding them. A. Pages 43 and 45 are the report to the Commissioners of South Dakota for the year ending June 30, 1897, and show the operating expenses of the entire system classified as required by the Inter-State Commerce Commission and the Commissioners of South Dakota. They also show South Dakota's proportion of such expenses of the entire system arrived at on the basis of the train mileage in the State of South Dakota as compared to the total mileage of the entire system. These figures do not include taxes either for the entire line or for South Dakota.

Q. Defendants, in their testimony, offered in evidence a statemant of gross earnings, operating expenses, including taxes, net earnings and interest on bonds for each month, ending December 31, 1897, being Exhibit . Have you prepared a statement for the other six months immediately preceding such period? A. I have, sir.

Exhibit 75 marked for identification.

Q. I show you Exhibits 75, and ask you to say whether that statement is one you have prepared? A. Yes, sir.

Q. Was that prepared by yourself or under your personal directions? A. It was prepared under my personal direction.

Q. Is it correct? A. Yes, sir; it is correct.

Mr. Kitteredge: I offer Exhibit 75 in evidence.

EXHIBIT 75.

Chicago, Milwaukee and St. Paul Railway Company—Entire System.

Six Months Ending December 31, 1895.

Gross earnings	$18,067,721 98
Operating expenses (incl. taxes), 56.26 %	10,165,127 27
Net earnings	$7,902,594 71
Interest on bonds	$3,817,179 85

Six Months Ending June 30, 1896.

Gross earnings	$14,614,106 90
Operating expenses (incl. taxes) 65.09 %	9,511,680 77
Net earnings	$5,102,426 13
Interest on bonds	$3,794,748 33

Six Months Ending December 31, 1896.

Gross earnings	$16,738,282 77
Operating expenses (incl. taxes) 59.46 %	9,953,406 61
Net earnings	$6,784,876 16
Interest on bonds	$3,778,355 68

Six Months Ending June 30, 1897.

Gross earnings	$13,748,485 22
Operating expenses (incl. taxes) 62.73 %	8,624,132 47
Net earnings	$5,124,352 75
Interest on bonds	$3,710,391 17

Six Months Ending December 31, 1897.

Gross earnings	$18,430,280 24
Operating expenses (incl. taxes) 59.13 %	10,897,193 81
Net earnings	$7,533,086 43
Interest on bonds	$3,637,273 53

General Auditing Department.

January 29, 1898.

Cross-Examination by Mr. Null.

Q. Mr. Winne, have you the report of the express company which apportions their earnings to the different branches? A. No, sir; I can send for it and get it if you want it.

Mr. Null: I wish you would get it.

Q. Have you the statement now which I called for? A. Yes sir; this is the statement.

Q. I will ask you what per cent. of the mileage of the system is constituted by the Iowa and Dakota Division? A. The Iowa and Dakota Division mileage is 8.99 per cent. of the entire mileage.

Q. And what per cent. of the express earnings is assigned to that division? A. The proportion of express business allotted to the Iowa and Dakota Division on the basis of statistics furnished to me by the express company and based on the actual express business done on the various lines is 3.44 per cent.

Q. What proportion of the mileage is in the Hastings and Dakota Division? A. 7.31 per cent.

Q. And what per cent. of the express business is assigned to that division? A. 5.14 approximately.

Q. What per cent. of the mileage is contained in the James River Division? A. 5.15 per cent.

Q. And what proportion of the express business is assigned to that division? A. 1.72 per cent.

Q. What proportion of the mileage is contained in the S. & D. Division? A. 5.67 per cent.

Q. And what proportion of the express is assigned to that division? A. 3.22 per cent.

Q. What proportion of the mileage of the system is contained in the Southern Minnesota Division? A. 8.69 per cent.

Q. And what proportion of the express earnings is assigned to that division? A. 3.21 approximately. The explanation in regard to the basis on which the express earnings are divided applies to each of these cases, of course —the basis furnished by the express company.

Re-direct Examination by Mr. Kittredge.

Q. You may explain the basis upon which these assignments are made. A. I previously explained that our contract with the express company provided for the payment of a lump sum, which permits them to do an express business upon the entire system. I have no means of dividing that. I have no record of the business that is done, and in order to divide it as fairly as possible, I applied to the exprees company at the beginning of the contract to tell me as nearly as might be the value of the different lines and branches to them, which I might use to divide the sum paid to us among the different lines. They furnished me such a statement, which I have shown here, and the percentages shown by this sheet have been in use since the beginning of the contract to this time.

Q. And such statement applies to all the different lines to which you have testified? A. Yes, sir.

And thereupon the hearing of said cause was adjourned to 2 o'clock p. m., of this day.

May 24, 1898, 2 p. m.

D. J. WHITTEMORE, recalled on the part of the defendants:

Direct Examination by Mr. Null.

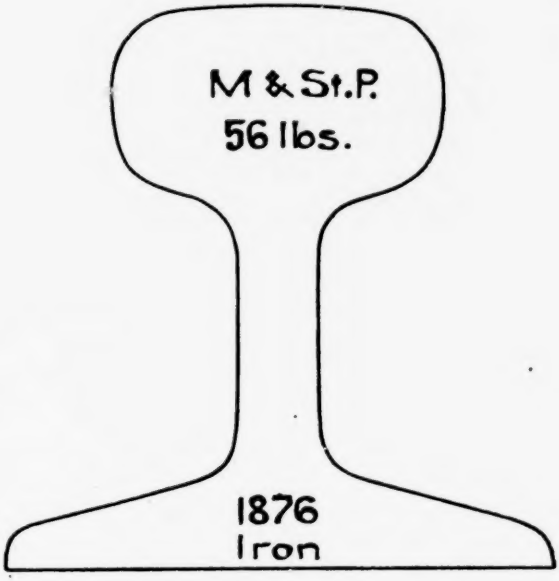
Q. Mr. Whittemore, have you found the diagrams of the rails sections that I asked you about this forenoon? A. I have. I have found templets from which I have made drawings.

Q. And I show you Exhibits 76, 77 and 78, and ask you if these are the drawings of the rail sections? A. Yes, sir; they are.

Mr. Null: We offer those in evidence (Exhibits 76, 77 and 78.)

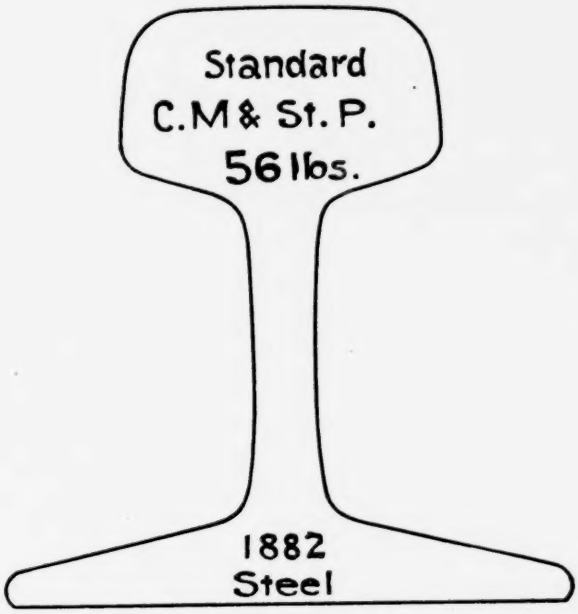
(Witness excused.)

DEFENDANT'S EXHIBIT 76.

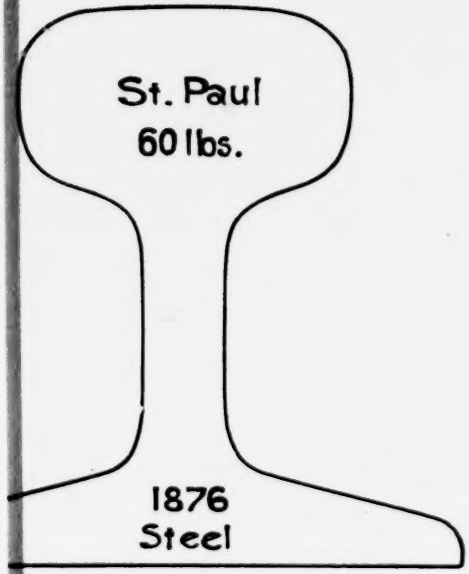


No 4

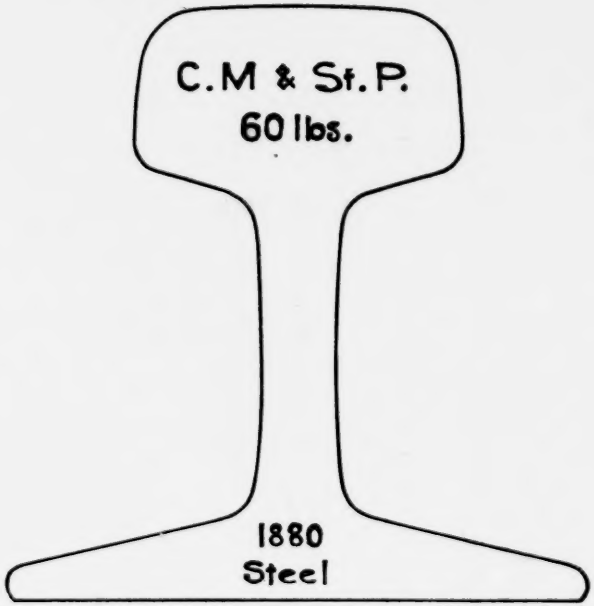
DEFENDANT'S EXHIBIT 77.



No. 3.



No 1



No 2

942

S. SANBORN, being called as a witness on the part of the complainants in rebuttal, was by the special examine first duly sworn to testify the truth, the whole truth and nothing but the truth, and testified as follows:

Direct Examination by Mr Kittredge.

Q. What is your business, Mr. Sanborn? A. I am genral superintendent of the Chicago and North-Western Railway Company.

Q. How long have you held such position? A. Eleven years.

Q. How long have you been engaged in the railroad business? A. I have been with this company—with the North-Western Railway Company—since 1863.

Q. Were you engaged in railroading prior to that tim e? A. I was.

Q. With what company? A. I commenced as brakeman on the Milwaukee and Mississippi Railway.

Q. In what year? A. In 1856.

Q. You may state the different positions you have held with the Chicago and North-Western Railway Company since 1863? A. I was ticket agent, general agent, superintendent of the Minnesota and Dakota Division, assisiant general superintendent and general superintendent

Q. At what time were you superintendent of the Minnesota and Dakota Division? A. In 1880-1881.

Q. And where were you located at that time? A. At Winona, Minnesota.

Q. Are you familiar with the South Dakota line of the Chicago and North-Western Railway Company? A. I am.

Q. During the years that you have mentioned have you had to do with the operation and maintenance and repair of railways? A. I have.

Q. Of the North-Western Railway? A. Yes, sir.

Q. Have you had to do with the replacement of ties? A. Yes, sir.

Q. What, in your judgment, is the average life of a tie? A. Well, I should judge, I should think ten years would be the outside limit.

Q. In other words, that is a liberal estimate against the railway? A. Yes, sir.

Q. What kind of ties are there in the tracks of the North-Western Railway in the State of South Dakota? A. Cedar, mostly, except in the curves; those are oak.

Q. What is the quality of the ties? A. The ties that were laid on our South Dakota line, with the exception of a little branch, were the finest cedar ties I ever saw in my life.

Q. State regarding their size? A. They were very large —very large ties.

Q. About what width of face did they average? A. They would go from seven inches to two feet. Of course there was not many that was two feet, but there were some—they were very large ties.

Q. What is the character of the equipment in use on your South Dakota line, particularly regarding the engines and motive power? A. It is very light—it is the lightest equipment we have

Q. And what effect has that upon the life of the tie in South Dakota? A. Well, it would have a very great effect upon the life of a tie in South Dakota. If we have small

engines our trains are small. We have a fifty-pound steel rail on the most of our track in South Dakota—that is, the rail that was originally laid there in 1880 and 1889. We have had ties on other divisions where our traffic has been heavy, and with the rails that we have in South Dakota, while the tie was not decayed, the weight of our engines and trains cut the rail down in the ties, sometimes so we had to take them out. It cuts a tie very quickly with a heavy locomotive and a heavy train with the rail we have there now.

Q. State, generally, the character and amount of business the North-Western Railway Company does in South Dakota? A. Our business in South Dakota is very light.

Q. Trains are light? A. Yes, sir.

Q. And the motive power is light? A. The motive power is light—fifteen and sixteen inch cylinders.

Q. Have you any engines in South Dakota larger than you have just mentioned? A. Not any to my knowledge—not any larger than that.

Q. Have you occasionally visited South Dakota in recent years? A. I have.

Q. Have you noticed the trains and motive power of the Chicago, Milwaukee and St. Paul Railway at Aberdeen and other places in South Dakota? A. I have seen them at Aberdeen and Yankton.

Q. State the character of the motive power on the Chicago, Milwaukee and St. Paul Railway as compared with that of the Chicago and North-Western Railway? A. It is much heavier.

Q. On the Milwaukee road? A. Yes, sir.

Q. What about the trains they haul? A. They haul larger trains than we do—they are heavier.

Q. You may state whether in your judgment it would be safe with the trains and motive power you saw on the Milwaukee road at the point you have named to be used on your South Dakota lines? A. I do not think we could use them on our South Dakota lines as they are to-day

Q. In case they were used, what, in your judgment, would be necessary to safely operate them? A. We would have to put in a great many new ties and ballast a great deal of the track to run such trains as they run on their lines.

Q. In regard to the replacement of ties, what has been the general policy of the Chicago and North-Western Railway Company in the State of South Dakota? A. To get along with as few as we could and keep the track safe—entirely safe with the light equipment we have.

Q. Is that true of the rails? A. Yes, sir. The rails that are there to-day are the fifty-pound steel rails, with the exception until last year we laid a heavy steel rail from Tracy to Lake Benton. Last year we put in six or seven miles of sixty-pound steel—that section of country through there is what we call the Snow Belt, and in bucking snow with a heavy engine as snow plow the rails were burned—what we call burned—very badly. The engine slipped and the tracks were rough, and we worked them out as fast as we could.

Q. You may state in a general way, as the reason for the management of the Chicago and North-Western Railway Company in regard to its ties and rails, what it cost to operate the North-Western lines in South Dakota as compared with its earnings? A. It cost us last year for the operation of the road $1.15 on the dollar.

Q. That is, it cost you $1.15 for every $1 you got. You give that as the reason? A. I do. We do not spend any money only to keep everything safe.

Q. That is, with reference to the light traffic and light equipment? A. Yes, sir.

Q. Now, assuming that you had trains of the character you saw on the Milwaukee road at the points you have named and the motive power that you saw there, you may state what in your judgment would be the average life of ties in the State of South Dakota? A. Well, what kind of wood would you use for ties?

Q. Well, the ordinary wood? A. Take the ties as they run, I think ten years would be as much as you could stand there.

Cross-Examination by Mr. Null.

Q. Mr. Sandorn, when you say fifteen and sixteen inch cylinders, what do you mean by that? A. I mean the cylinder—that is the scope—fifteen to twenty-four and fifteen to twenty-six—that is what we go by in the size of the cylinder.

Q. And what is the weight of the ordinary eight-wheel engine with a cylinder stroke of fifteen or sixteen by twenty four? A. Well, I don't remember now what they were, but I should think from forty to fifty tons, along there, somewhere; I would not say just what they were.

Q. Your judgment is that a locomotive in use on the North-Western would be forty or fifty tons? A. They may be heavier and possibly not so heavy.

Q. That would be your judgment? A. That would be my judgment without looking at it—I have not paid any attention to it for a long time.

Q. Do I understand you to say a tie is destroyed more by the traffic than the natural decay? A. In some cases it is and in some cases it is not.

Q. So that both elements would enter into the problem as to how long the tie would last? A. Yes, sir.

Q. Will a rail cut into a tie so as to destroy it? A. Yes, sir; it will.

Q. And is that prevented by a heavier rail of sixty or eighty pounds? A. Yes, sir; it is, in a measure, because the web is wider.

Q. And by the web you mean the part that rests on the ties? A. Yes; the part that rests on the ties.

Q. And it would also be influenced by the width of the tie itself? A. Yes, sir; that would make some difference, there would be a greater bearing.

Q. Does the rail cut into soft wood ties more than in the oak ties? A. Yes, sir

Q. Suppose that the traffic and the rolling stock was so light as not to destroy the ties by cutting, are you able to state what would be the life of a tie depending only on the matter of decay? A. No, sir; I would not be willing to state just what that is if you refer to cedar ties.

Q. Yes, sir. A. I would not state what the life of a cedar tie would be after decay, because the ties we sent to Dakota were an uncommon lot of ties. We never had any like them since, because we got them off our own land in Michigan—the first that we used, and we had the choice of the entire country up there.

Q. It is a fact, is it not, Mr. Sanborn, that a small tie that is cut out of green timber will last longer than a large tie that is cut out of matured timber? A. You could cut a

green tie or a matured tie and have either one so small it would not last. If you cut a tie from what we call the sap end it is going to last longer—

Q. The proposition is this: Will not a tie, say eight or nine inches face, cut out of green timber, last longer than a large logging tie that faces twenty-four inches? A. In some cases. For instance, those ties I spoke of up there were large logging ties, some of those ties had a hollow center, some of them had a hollow butt, and those ties, of course, when they are decaying—when we put them in would not last as long as the eight-inch face—nice, solid straight ties.

Q. There is a difference whether the tie is cut out of green timber or matured timber? A. There is a difference whether it is cut from green timber or dead timber.

Q. The dead timber will not last as long? A. No, sir; a tie cut from a living tree is better than one that has been dead for a long time.

Q. You know, of course, when the lines in South Dakota were constructed? A. Yes, sir.

Q. That is, approximately? A. Yes, sir.

Q. Would it be any surprise to you now if 60 per cent. of the ties put in that line at the time of construction were still in the track? A. No, sir.

Q. It would be no surprise to you? A. No, sir.

Q. Would it be any surprise to you if in the last ten years since 1889, and concluding with 1898, if the entire replacement had not exceeded 80 per cent.? A. No, sir; there is no business out there, or nothing to use the road for to speak of. Our traffic has been very light—our machinery and everything is very light on the Dakota Division.

Q. So that the destruction of ties in South Dakota would

be due entirely to decay? A. No, sir; I think it would be due to the traffic.

Q. I mean taking the conditions as they exist in South Dakota? A. The conditions on our line as they exist in South Dakota?

Q. I mean taking the conditions as they exist in South Dakota? A. The conditions on our line as they exist in South Dakota—take it on the Northern Iowa Division we put in cedar ties with fifty-pound rails. We had to renew them there largely, and the ties that were taken out—many of them—were sound, but the rail has cut them short off. It would have been the same in Dakota had the machinery been as heavy and had we had as heavy business on the Dakota Division.

Q. Do you know, or are you able to state, about the average tonnage of your freight trains in South Dakota? A. I could not tell you just what our tonnage is in South Dakota. I do not remember.

Q. You would not be able to make any approximate statement? A. No, sir; I would not do it.

Q. Is there any difference in the freight cars sent to South Dakota and those used on the other parts of the system? A. No, sir.

Q. They simply move wherever the traffic takes them? A. Yes, sir.

Q. And in your South Dakota business you have small cars and modern large cars all on the same train? A. Yes, sir.

Q. And it is a fact, is it not, that on your lines in South Dakota they haul eighteen to twenty loads on a freight train? A. Not with one engine.

Q. With one engine about what do they haul? A. I should say about twelve to fifteen cars.

Q. It is a fact, is it not, you run a great many freight trains there with two engines? A. That is within the last six months, yes.

Q. And especially in handling the cattle business? A. Yes, sir.

Q. And with those trains with two engines they run twenty-five loads? A. I think about twenty-two, if I remember right. I think the Milwaukee road hauls greater loads than they as a rule. I think they do. I do not know as far as their cattle trains are concerned, but their freight trains, which I have seen at Aberdeen, are much larger than ours.

Q. You have reference to the train running east from Aberdeen over the Hastings and Dakota Division? A. Yes sir.

Q. You know nothing about the trains running over the other lines in the state? A. Nothing, except as I saw them at Yankton and Aberdeen. I saw one at Yankton had a ten-wheel engine and a long train. I think probably they had thirty cars.

Q. Would you think that your freight trains in South Dakota would average ninety tons to the train aside from the weight to the rolling stock? A. I do not believe that our freight trains the year around would average ninety tons in South Dakota.

Q. But an ordinary load of fifteen cars would average ninety tons? A. An ordinary load of fifteen cars of grain or anything of that kind, but ten cars of merchandise or fifteen cars of merchandise I do not think will average ninety tons in South Dakota.

Q. Some of your line is South Dakota is laid with fifty-pound iron, is it not? A. Some on the Jim River line; yes, sir.

Q. From James River Junction to Columbia? A. From James River Junction to Ordway. I am not certain that the fifty-pound iron extends from Ordway to Columbia. The line was originally built to Ordway and afterwards extended to Columbia.

Q. The replacement of rails about which you spoke a moment ago was east of Elkton? A. Yes, sir.

Q. And it has not reached the line of the state of South Dakota? A. I think it is just about at the line, as I remember it.

Q. So there has been no sixty-pound steel laid in the state? A. We laid a little, if I remember right, last fall—two, three or four miles, something like that, from the Jim River Junction north on the Jim River line, as I remember. There was a very little laid in there last fall.

Q. Was that sixty-pound steel or fifty-six-pound steel? A. That was sixty-pound steel we laid there last fall.

Q. The freight traffic of ninety-six tons to the train would be very light, would it not? A. Yes, sir.

Q. And would you say that the ordinary freight traffic of ninety-six tons to the train would have the effect of cutting out the ties, as you speak of? A. Not when the trains run as far apart as they do in South Dakota.

Q. One train each way a day? A. One train each way a day, I think they would last for some time.

Q. What do you say would be the difference in the wearing quality of a cedar tie and a hemlock tie? A. A cedar tie will last longer than a hemlock tie. We calculate the life of hemlock ties is about five years.

Q. You put in some hemlock ties on the Groton line? A. Yes, sir.

Q. They have to be replaced? A. Yes, sir.

Q. You are not now using any hemlock ties in South Dakora? A. No, sir; we get our ties from Michigan, and it is very expensive to haul a hemlock tie from Michigan to Dakota to put in the tracks there.

Q. What would you say as to the difference in quality between a cedar tie and an oak tie in that climate? A. I should think a cedar tie would last longer than an oak tie in that climate. I should think it would last a good deal longer. The oak ties that we put in on our curves on the Dakota Central have been renewed several times since that track was built.

Q. The iron rails that were taken up from the four miles north of the River Junction have been used for repair and replacement of the iron rail section? A. A good deal were, such as were not fit for use, but the most of those rails—the first three or four miles of them—went to the scrap heap. A year ago this last winter was a very hard winter on our track in Dakota, and was especially hard on the Jim River Valley line, and the track from Redfield, South Dakota, was in bad shape after we come out of the winter, running those engines with these big plows. Before I could get the iron I sent two miles of fifty-pound steel up there and took out those rails. It was so rough I took them out, and the most of it was scrap; then I put in the sixty-pound rails and took out the fifty-six-pound rails.

Q. Was that two miles put in one continuous stretch or used where it was needed? A. The steel?

Q. Yes, sir. A. I think it was put in in one continuous piece—I would not say as to that; I never asked Mr. Oliver in regard to it.

Q. This process of cutting into the car would be arrested quite a little with a sixty-pound rail as compared with a fifty-pound rail? A. Yes, sir; it would be better than a fifty-pound rail, but there is more depending on the traffic put on it in regard to its cutting in the tie. I have noticed that on the Iowa Division they are continually taking out good cedar ties to-day that are not decayed and are sound but are not fit for those tracks simply on account of the traffic they have over those rails.

Q. And it would also be affected by the question as to whether the ties were laid 2,600 or 3,000 to the mile, would it not—that is, the quantity of ties in the mile? A. Why, the more bearing you get for the rail, of course, that would affect it.

Q. It makes quite a difference whether there are fifteen or eighteen ties to the rail—three extra ties to the rail would make some difference? A. It would make some difference, of course.

Q. Passenger trains in that territory are not heavy enough to affect the problem? A. Not unless the cars would; it is not the load.

Q. And there is no material difference in the passenger trains upon the same road? A. No, sir; the coaches run through from Chicago to Pierre.

Q. The same is true of the Milwaukee road as well as the North-Western? A. Yes, sir.

Re-direct Examination by Mr. Kittredge.

Q. The ties you have spoken of, which are obtained in Upper Michigan, are taken from the company's lands? A. The most of them. That is, we took them all from the company's land for awhile, now we take them from the settlers up there.

Q. It is necessary to have the ties and rails on hand to be able to handle your maximum business, is it not? A. Yes, sir.

Q. And the number of ties under a thirty-foot rail depends on the face of the ties? A. Yes, sir.

Q. And in your tracks there are from fifteen to eighteen to the rail? A. Yes, sir.

(Witness excused.)

W. N. D. WINNE, recalled for defendants:

Direct Examination by Mr. Null.

Q. I show you Exhibit 79 and ask you if that was prepared under your direction? A. It was not prepared under my direction. It was a question not asked of me; it was a question asked Mr. Earling, was it not? I do not know who asked for it—it is a part of the record of the engineer's office of bridges and buildings.

Q. You cannot testify whether it is correct? A. I would rather not—it is not within my business.

Q. When the bonds of the company mature, how are they usually disposed of? Paid in cash or refunded? A. Well, that is at the option of the holders. If they want their money, they are entitled to it and get it. If they prefer to take other bonds they have that privilege.

Q. If they are paid in cash you sell other bonds to pay them, do you? A. Yes, sir; our general mortgage provides for taking up the bonds as they become due.

Q. On pages 77 and 78 of the printed transcript you testified concerning the several forms of tickets and different rates of passenger fare; does that relate to the traffic in

South Dakota? A. I will say I was then testifying in regard to the rate at which tickets reported by the agent at Mitchell for a certain month were sold, and the report probably comprises inter-state business as well as business local to South Dakota.

Q. Who is the chairman of the board of directors of the company? A. We have no such officer.

Q. Who presides at the meetings of the directors? A. The president, when he is there.

Q. The president of the road? A. Yes, sir.

Q. What is the salary of the president of the road?

Mr. Kittredge: Objected to as incompetent and immaterial.

A. I don't know.

Q. You are unable to state? A. I am unable to state.

Q. And who is the general manager of the company at this time? A. The general manager of the company at this time is W. G. Collins.

Q. Are you able to state the salary he is paid by the company? A. I am not.

Q. The payment of these salaries are certified through your department? A. Not in detail.

Q. Can you secure the information called for in the last two questions from the records in your office? A. No, sir.

Q. Do you know in which department a record is kept of those salaries? A. I decline to answer.

Mr. Temple: Let the record show that the witness declines to answer the question under the advice of counsel for the complainant.

(Witness excused.)

ONWARD BATES, recalled by the defendants:

Direct Examination by Mr. Null.

Q. Was this statement prepared in your office and under your supervision—Exhibit 79? A. Yes, sir.

Q. And it is a copy, is it? A. I have not the least doubt in the world it is a copy. Yes, I will say it is a copy.

Exhibit 79 offered in evidence.

DEFENDANTS' EXHIBIT 79.

Bridges in South Dakota June 30, 1897.

1 iron bridge, 2 spans—length	124 feet.	
7 wooden bridges, 7 spans—length	935 "	
2 iron trestles—length	184 "	
		1,243 feet.
680 pile bridges—length	50,920 "	
Total	52,163 "	

1 overhead highway crossing.

Cross-Examination by Mr. Kittredge.

Q. Mr. Bates, Exhibit 79 shows the bridges in South Dakota June 7, 1897? A. Yes, sir.

Q. Including pile bridges? A. Yes, sir.

Q. And does not show the length of the bridges at all times at the date the road was constructed? A. No, sir.

Q. Many of the pier bridges have been filled in since the time of the construction, and the date of this exhibit? A. Yes, sir; and before the date of this exhibit.

And thereupon the taking of evidence in said case was adjourned to May 25, A. D. 1898, at 11 o'clock a. m.

May 25, 1898, 11 a. m.

It is agreed that W. S. Milligan is the tax commissioner of the complainant company, and has been such tax commissioner for the three years last past.

Mr. Kittredge. The testimony of the complainant is closed.

Mr. Null: The testimony of the defendants is closed.

And it is stipulated that the examiner may procure a bound copy of the printed record in this case containing the exhibits and certify and report the same to the circuit court of the United States as a record of the evidence in this case, counsel waiving the signatures to the testimony of the several witnesses.

I hereby certify that the foregoing is the testimony of the witnesses on behalf of the complainant and defendants taken by me in the above-entitled action.

L. W. CROFOOT,
Special Examiner.

UNITED STATES OF AMERICA:

In the Circuit Court of the United States for the District of South Dakota, in and for the Southern Division.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant, vs. W. H. TOMPKINS, W. T. LA FOLLETTE, ALEXANDER Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, Attorney General of said State, Defendants.	In Equity.

To the honorable judges of the circuit court of the United States for the district of South Dakota, sitting in equity:

I, L. W. Crofoot, having been duly appointed by order of said court, dated the 6th day of December, 1897, as special examiner in the above-entitled action to take the testimony of all witnesses examined therein and report the same to the court with all convenient speed, and authorizing and empowering me as such special examiner to take said testimony, both within and without the district of South Dakota, do respectfully report as follows:

First.

Before proceeding to take the testimony in said action I took and subscribed and filed with the clerk of said court an oath to faithfully perform my duty as such special examiner.

Second.

That the testimony on behalf of said complainant and on behalf of said defendants, as above set forth, was taken by me, at the office of the complainant, in the city of Chicago, in the State of Illinois, and at the office of the railroad commission of the State of South Dakota, in the city of Sioux Falls, in the State of South Dakota, at the times mentioned therein, which testimony is herewith returned to said court as a part of this report.

Third.

That each witness so examined before me was, before testifying, first duly sworn to testify the truth, the whole truth, and nothing but the truth.

Fourth.

That the oral testimony of said witnesses, as above set forth, was taken in shorthand by William Wallace and A. S. Carpenter, competent stenographers, selected and agreed upon by the solicitors and counsel for both parties, and that said testimony was by them reduced to longhand, and, after being read over by said witnesses, was set up in type and printed as above set forth.

Fifth.

That it was stipulated between the solicitors and counsel for both parties that a bound copy of the printed record in this case containing the exhibits should be certified and reported by me to the said circuit court of the United States as the record of the evidence in said case, counsel waiving the signatures to the testimony of the several witnesses.

Sixth.

That it was agreed by the solicitors and counsel for both parties that the following exhibits, which were offered in evidence, should not be printed in the foregoing record, to wit: Exhibit 12*a*, Exhibit 12*b*, Exhibit 12*c*, Exhibit 12*d*, Exhibit 17, Exhibit 18, Exhibit 19, Exhibit 20, Exhibit 21, Exhibit 24, Exhibit 36 & ½, and Exhibit 55; and I do further report that all of the original exhibits offered in evidence (including those above specified) are herewith returned by me to said court as a part of this report.

Seventh.

I do further report to said court that I was notified that the solicitors and counsel for both parties had agreed to commence the taking of testimony at the city of Chicago, in the State of Illinois, on the 6th day of January, 1898, and that I went to Chicago for the purpose of taking the same, but that the solicitors for the said parties not being ready to proceed, it was agreed by them that the taking of the complainant's testimony should be commenced on the 12th day of January, 1898, at two o'clock p. m., at the office of the Chicago, Milwaukee & St. Paul Railway Company in the city of Chicago, State of Illinois, at which time the taking of said testimony was commenced, and that the taking of said testimony was adjourned from time to time by agreement of counsel for both parties, as stated in the printed testimony herewith returned; that during the taking of such testimony considerable time was required to examine the large mass of records for the purpose of preparing tabulated statements therefrom to present the results of such examination in a brief

and comprehensive form, and that frequent adjournments were taken for the purpose of preparing such tabulated statements and to accom-odate counsel and witnesses, and that owing to the importance of the matters involved in said case such adjournments were necessary and proper, and that by reason thereof I was obliged to make a number of journeys to the place where said testimony was taken.

Eighth.

I further report that I was actually and necessarily engaged for 50 days in taking said testimony, in traveling to and from the place where said testimony was taken, and in submitting said testimony, after it had been transcribed, to the witnesses for their examination, and that said testimony so taken by me includes the exhibits offered in evidence, comprising 5,362 folios; that the testimony taken on behalf of said complainant, including the cross-examination of complainant's witnesses and the exhibits offered in evidence by the complainant and upon cross-examination of complainant's witnesses, is 3,841 folios, and that I was actually and necessarily engaged in taking said testimony of complainant's witnesses for a period of 39½ days; that the testimony taken in behalf of the defendants, including the cross-examination of defendants' witnesses and the exhibits offered in evidence by the defendants and upon cross-examination of their witnesses, comprises 1,521 folios, and that I was actually and necessarily engaged, as aforesaid, in taking the testimony of said witnesses of defendants 10½ days.

Wherefore I respectfully petition the court to make an order fixing the compensation to be allowed me as special examiner and designating the amount which each party is to pay.

All of which is respectfully submitted.

L. W. CROFOOT,
Special Examiner.

(Indorsed:) Filed June 27th, 1898. Oliver S. Pendar, clerk.

And afterwards, to wit, on said 27th day of June and also on the 28th and 29th days of June, A. D. 1898, this cause was duly argued to said court upon the pleadings and proofs by the respective counsel and submitted to the court.

And afterwards, to wit, on the 20th day of July, A. D. 1898, the court makes and files its decree herein, which is duly entered of record in said court, in words and figures the following, to wit:

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO., Complainant,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, & ALEXANDER KIRKPATRICK, Constituting the Board of Railroad Commissioners of the State of South Dakota, and MELVIN GRIGSBY, Attorney General for the State of South Dakota, Defendants.

Decree.

Granted at the regular April, 1898, term of the United States circuit court for the district of South Dakota, begun and holden at the court-room in the Federal building, in the city of Sioux Falls, South Dakota.

Present: The Hon. JOHN E. CARLAND, district judge, and the officers of the court, and A. B. KITTREDGE, Esqr., and GEORGE R. PECK, Esqr., of counsel for complainant, and T. H. NULL, Esqr., and W. O. TEMPLE, Esqr., solicitors and of counsel for defendants.

This cause came on to be heard upon the pleadings and proofs at this term and was argued by counsel; and thereupon, upon consideration thereof, the court finds the following facts:

I. That the value of complainant's property in the State of South Dakota is ten million dollars.

II. That the fair value of the proportion of complainant's said property assignable to local traffic was, for the year ending June 30th, 1894, $2,200,000, and for the year ending June 30th, 1895, $2,600,000, and for the year ending June 30th, 1896, $2,100,000, and for the year ending June 30th, 1897, $1,900,000.

III. That the gross local earnings of complainant in the State of South Dakota for the fiscal year ending June 30th, 1894, was $407,606.35, and for the year ending June 30th, 1895, was $330,642.85, and for the year ending June 30th, 1896, was $328,105.95, and for the year ending June 30th, 1897, was $311,085.42.

IV. That the local earnings on the complainant's lines under existing tariffs, on the same proportion of the total value of the road in South Dakota as the local earnings bear to the gross earnings from all sources in South Dakota, were:

For the year 1894, 18.5 per cent.
For the year 1895, 12.7 per cent.
For the year 1896, 15.6 per cent.
For the year 1897, 16.3 per cent.

V. That applying the schedule of rates sought to be enjoined in this action to the local traffic during the years above mentioned, on the same method of calculation, the value of complainant's property assignable to local traffic would be for the years ending June 30th, 1894, $1,900,000; June 30th, 1895, $2,300,000; June 30th, 1896, $1,800,000; June 30th, 1897, $1,600,000.

VI. Under the commissioners' schedule the gross earnings from

local traffic would have amounted to the sum of $342,381.98 for the year ending June 30th, 1894, and $277,518.40 for the year ending June 30th, 1895, and $275,607.79 for the year ending June 30th, 1896, and $261,295.21 for the year ending June 30th, 1897.

VII. That these earnings for the fiscal year 1894 would equal 18% of the value thus ascertained, and for the year 1895 would equal 12.1%, and for the year 1896 would equal 15.3%, and for the year 1897 would equal 16.2%.

VIII. That owing to the small difference between the percentage earned under the complainant's schedule of rates and fares and the commissioners' schedule of rates & fares for the four years prior to the commencement of this suit, and owing further to the amount of the percentages which would have been earned during said four years under the commissioners' schedule, the court is unable to find beyond a reasonable doubt that the local earnings under said commissioners' schedule would not during the years aforesaid have earned the reasonable cost of earning said local earnings and some reward to the owner of the property over and above said cost of operation.

IX. That the court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896, & 1897 was.

X. As a conclusion of law the court finds that the enforcement of the proposed schedule of reasonable maximum rates & fares will not deprive the complainant of its property without due process of law or deprive it of the equal protection of the laws, or operate to take the property of complainant for public use without just compensation.

Now, therefore, it is ordered, adjudged, and decreed that the prayer of complainant in its bill of complaint be, and is hereby, in all things denied, and that the complainant's bill of complaint be, and is hereby, in all things dismissed, and this action be, and is hereby, in all things absolutely dismissed.

That the defendants recover their costs and disbursements, taxed and allowed in this action as follows: To the defendant railroad commissioners, the sum of $916.22, and to the defendant attorney general, the sum of $—; to which judgment and decree the complainant duly excepted.

By the court:

JOHN E. CARLAND, *Judge.*

Done in open court this 20th day of July, 1898.

Attest: OLIVER S. PENDAR, *Clerk.*

(Endorsed:) # 286. Chicago, Milwaukee & St. Paul R'y Co. *vs.* Wm. H. Tompkins *et als.* Decree. Filed Jul- 20, 1898. Oliver S. Pendar, clerk.

And afterwards, to wit, on the same day, the complainant herein files in open court, with the clerk thereof, its assignment of errors

together with its petition, praying an appeal of this cause to the Supreme Court of the United States; which said assignment of errors and petition are in words and figures the following, to wit:

In the Circuit Court of the United States, District of South Dakota Southern Division.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant, *vs.* WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and Alexander Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, Attorney General for the State of South Dakota, Defendants.	Assignment of Errors.

Comes now The Chicago, Milwaukee & St. Paul Railway Company, the complainant above named, and says there is manifest error in the record of the proceedings and decree in the above-entitled cause in this, to wit:

1. That the said court erred in finding, adjudging, and decreeing that the value of complainant's property in the State of South Dakota is $10,000,000.00.

2. That the said court erred in finding, adjudging, and decreeing that "the fair value of the proportion of complainant's said property assignable to local traffic was, for the year ending June 30th, 1894, $2,200,000.00, and for the year ending June 30th, 1895, $2,600,000.00, and for the year ending June 30th, 1896, $2,100,000.00, and for the year ending June 30th, 1897, $1,900,000.00."

3. That the said court erred in finding, adjudging, and decreeing that "the local earnings on the complainant's lines under existing tariffs on the same proportion of the total value of the road in South Dakota as the local earnings bear to the gross earnings from all sources in South Dakota, were:

For the year 1894, 18.5 %.
For the year 1895, 12.7 %.
For the year 1896, 15.6 %.
For the year 1897, 16.3 %."

4. That the said court erred in finding, adjadging, and decreeing that, "applying the schedule of rates sought to be enjoined in this action to the local traffic during the years above mentioned, on the same method of calculation, the value of complainant's property assignable to local traffic would be for the years ending June 30th, 1894, $1,900,000.00; June 30th, 1895, $2,300,000.00; June 30th, 1896, $1,800,000.00; June 30th, 1897, $1,600,000.00."

5. That the said court erred in finding, adjudging, and decreeing that "these earnings for the fiscal year 1894 would equal 18 % of he value thus ascertained, and for the year 1895 would equal 12.1 %,

and for the year 1896 would equal 15.3 %, and for the year 1897 would equal 16.2 %."

6. That the said court erred in finding, adjudging, and decreeing that, "owing to the small difference between the percentage earned under the complainant's schedule of rates and fares and the commissioners' schedule of rates and fares for the four years prior to the commencement of this suit, and owing further to the amount of the percentages which would have been earned during said four years under the commissioners' schedule, the court is unable to find beyond a reasonable doubt that the local earnings under said commissioners' schedule would not during the years aforesaid have earned the reasonable cost of earning said local earnings and some reward to the owner of the property over and above said cost of operation."

7. That the said court erred in finding, adjudging, and decreeing that "the court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896, and 1897 was."

8. That the said court erred in concluding as a matter of law, and adjudging and decreeing, that the enforcement of the proposed schedule of reasonable maximum rates and fares will not deprive the complainant of its property without due process of law.

9. That the said court erred in concluding as a matter of law, and adjudging and decreeing, that the enforcement of the proposed schedule of reasonable maximum rates and fares will not deprive the complainant of the equal protection of the laws.

10. That the said court erred in concluding as a matter of law, and adjudging and decreeing, that the enforcement of the proposed schedule of reasonable maximum rates and fares will not operate to take the property of complainant for public use without just compensation.

11. That the said court erred in ordering, adjudging, and decreeing that the prayer of complainant in its bill of complaint be in all things denied.

12. That the said court erred in ordering, adjudging, and decreeing that the complainant's bill of complaint be in all things dismissed.

13. That the said court erred in ordering, adjudging, and decreeing that this action be in all things absolutely dismissed.

14. That the said court erred in its said judgment and decree and its decision herein, in that it failed to consider the amount actually and necessarily paid out by the complainant in operating expenses to earn the moneys received on account of local traffic.

Dated July 20th, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
By GEO. R. PECK AND
A. B. KITTREDGE, *Its Solicitors.*

GEO. R. PECK, *Of Counsel.*

(Endorsed:) #286. Circuit court of the United States, district of South Dakota, southern division, eighth judicial circuit. Chicago, Milwaukee and St. Paul Railway Company, complainant, against William H. Tompkins *et als.*, defendants. Assignment of error-. Filed Jul- 20, 1898. Oliver S. Pendar, clerk. A. B. Kittredge, attorney for complainant, Sioux Falls, South Dakota.

In the Circuit Court of the United States, District of South Dakota, Southern Division.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY Company, Complainant, *vs.* WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and Alexander Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, Attorney General for the State of South Dakota, Defendants.	Petition Praying an Appeal.

Now comes The Chicago, Milwaukee & St. Paul Railway Company, complainant in the above-entitled cause, and says that on this 20th day of July, A. D. 1898, said defendants obtained a judgment and decree against this complainant in said cause and in said court, in which, among other things, it was adjudged and decreed that the prayer of complainant in its bill of complaint be in all things denied, and that the complainant's bill of complaint be in all things dismissed, and that this action be in all things absolutely dismissed with costs.

And this complainant alleges that it is prejudiced by the said judgment and decree, and that there is error in the proceedings of the court by which the same was obtained, and that the said judgment and decree is erroneous in matters and things more particularly shown by the assignment of error- filed herewith and by the record in said cause.

And by reason of said errors the said complainant, conceiving itself aggrieved by the said judgment and decree, doth hereby appeal therefrom to the Supreme Court of the United States, and prays that its appeal may be allowed, and that a transcript of the record and proceedings, duly authenticated, may be sent to said United States Supreme Court, whereby said judgment and decree may be reversed, and whereby this complainant may be given such other and further relief as may be just and proper.

Dated July 20th, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, *Complainant,*
By GEO. R. PECK AND
A. B. KITTREDGE, *Its Solicitors.*

GEO. R. PECK, *Of Counsel.*

(Endorsed :) #286. Circuit court of the United States, district of South Dakota, southern division, eighth judicial circuit. Chicago, Milwaukee and St. Paul Railway Company, complainant, against William H. Tompkins *et al.*, defendants. Petition praying an appeal. Filed Jul- 20, 1898. Oliver S. Pendar, clerk. A. B. Kittredge, attorney for complainant, Sioux Falls, South Dakota.

And afterwards, to wit, on the same day, the appeal prayed for in open court was duly allowed by the court, and the proceedings of said court, together with the order signed by the court, *was* entered of record in the journal thereof in words and figures the following, to wit:

Chicago, Milwaukee & St. Paul Railway Company, Complainant, *vs.* Wm. H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, Attorney General for the State of South Dakota, Defendants.	In Equity. No. 286.

Comes this day the parties to this cause, by their respective solicitors, in open court; and the complainant herein, by its solicitors, files its assignment of errors and petition for an appeal, praying in open court for the allowance of an appeal to the Supreme Court of the United States from the decree and judgment entered this day; whereupon an order allowing such appeal is made and signed by the court and entered of record herein, as follows:

Chicago, Milwaukee & St. Paul Railway Company, Complainant, *vs.* William H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, Constituting the Board of Railroad Commissio[illegible] of the State of South Dakota, and Melvin Grigs[illegible] Attorney General for the State of South Dakota, Defendants.	Order Allowing Appeal.

This cause coming on to be heard on the petition of The Chicago, Milwaukee & St. Paul Railway Company, complainant, praying an appeal to the Supreme Court of the United States, it is hereby ordered that the appeal be, and is hereby, allowed to the Supreme Court of the United States, as prayed in said petition, and cost bond fixed at the sum of five hundred dollars be given by the complainant, without sureties, and to be approved by the clerk of this court.

By the court:

JOHN E. CARLAND, *Judge.*

Dated July 20th, 1898.

We hereby consent to the giving of the bond by the complainant, The Chicago, Milwaukee & St. Paul Railway Company, without sureties, and consent to the approval of the same.

T. H. NULL,
Defendants' Solicitors.

(Endorsed:) # 286. Circuit court of the United States, district of South Dakota, southern division, eighth judicial circuit. Chicago, Milwaukee and St. Paul Railway Company, complainant, against William H. Tompkins *et al.*, defendants. Order allowing appeal. Filed Jul- 20, 1898. Oliver S. Pendar, clerk. A. B. Kittredge, attorney for complainant, Sioux Falls, South Dakota.

And afterwards, to wit, on the same day, the bond on appeal was duly presented, approved, and filed herein; which said bond is in words and figures the following, to wit:

In the Circuit Court of the United States, District of South Dakota, Southern Division.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant, *vs.* WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and ALEXANDER Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, and Melvin Grigsby, Attorney General for the State of South Dakota, Defendants.	Bond.

Know all men by these presents that the Chicago, Milwaukee & St. Paul Railway Company is held and firmly bound unto the abovenamed William H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, constituting the board of railroad commissioners of the State of South Dakota, and Melvin Grigsby, attorney general for the State of South Dakota, in the full and just sum of five hundred dollars, to be paid to the said William H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, constituting the board of railroad commissioners of the State of South Dakota, and Melvin Grigsby, attorney general for the State of South Dakota; for the payment of which, well and truly to be made, the said Chicago, Milwaukee & St. Paul Railway Company binds itself, its successors and assigns, forever, firmly by these presents.

Sealed and dated this 20th day of July, in the year of our Lord one thousand eight hundred and ninety-eight.

Whereas lately, at the April term, A. D. 1898, of the circuit court of the United States for the district of South Dakota, southern division thereof, in a suit depending in said court between The Chicago, Milwaukee & St. Paul Railway Company, complainant, and William

H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, constituting the board of railroad commissioners of the State of South Dakota, and Melvin Grigsby, attorney general for the State of South Dakota, defendants, decree was rendered against the said complainant, and an allowance obtained of an appeal from the said court to the Supreme Court of the United States to reverse the said decree in the aforesaid suit, and an appeal having been taken to the Supreme Court of the United States in open court at the term at which the said judgment and decree was rendered, to wit, at the time said decree was made and entered, and an entry of the allowance of said appeal having been made in the minutes of the court:

Now, the condition of the above obligation is such that if the above-named Chicago, Milwaukee & St. Paul Railway Company shall prosecute said appeal to effect and answer all damages and costs if it fail to make good its plea, then the above obligation to be void; else to remain in full force and virtue.

Dated July 20th, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
By A. B. KITTREDGE,
Its Attorney, Duly Authorized.

Within bond approved by me, as per order of court, this 20th day of July, 1898.

OLIVER S. PENDAR, *Clerk.*

(Endorsed:) #286. Circuit court of the United States, district of South Dakota, southern division, eighth judicial circuit. Chicago, Milwaukee and St. Paul Railway Company, complainant, against William H. Tompkins *et al.*, defendants. Bond on appeal. Filed Jul- 20, 1898. Oliver S. Pendar, clerk. A. B. Kittredge, attorney for complainant, Sioux Falls, South Dakota.

And afterwards, to wit, on the 2nd day of September, A. D. 1898, a written stipulation, signed by the respective solicitors of the parties hereto, was duly filed herein; which said stipulation is in words and figures the following, to wit:

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant,
vs.
WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and ALEXANDER Kirkpatrick, Constituting the Board of Railway Commissioners of the State of South Dakota, Defendants.

It is hereby stipulated and agreed by and between the parties hereto that the clerk of this court may omit from his transcript of the record to the Supreme Court of the United States on appeal the

original exhibits filed by the examiner in said circuit court, but shall include therein the printed record filed by the examiner.

GEO. R. PECK AND
A. B. KITTREDGE,
Complainant's Solicitors.
T. H. NULL &
W. O. TEMPLE,
Defendants' Solicitors.

(Endorsed:) No. 286. Chicago, Milwaukee & St. Paul R'y Co. *vs.* Wm. H. Tompkins *et als.* Stipulation. Filed September 2nd, 1898. Oliver S. Pendar, clerk.

On the 6th day of July, A. D. 1898, the court handed down its opinion in this cause; which said opinion is in words and figures the following, to wit:

In the Circuit Court of the United States, District of South Dakota.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant,
vs.
WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and ALEXANDER Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, *et als.*, Defendants.

George R. Peck and A. B. Kittredge, solicitors for complainant; T. H. Null and W. O. Temple, solicitors for defendants.

CARLAND, *District Judge:*

The above entitled action has been submitted upon pleadings and proofs. The object of the action is to perpetually restrain the defendants as railroad commissioners of the State of South Dakota from putting in force a certain schedule of rates and fares made by them on the 26th day of August, 1897, prescribing the rates and fares to be charged by common carriers within the State of South Dakota for the carriage of passengers and freight. At the time of the filing of the bill a temporary injunction was issued and the defendants have in the meantime been restrained from putting into effect the schedule referred to.

The testimony that has been reported by the examiner is quite voluminous, consisting of about one thousand pages of printed matter, but the testimony which must really decide this case is not of great length.

In the first place, it is proper to state briefly the principles of law which have been established by the Supreme Court of the United States for the guidance of this court in deciding actions of this char-

acter. In Smith *v.* Ames, 169 U. S., page 526, the Supreme Court declares the following principles of law to be settled:

"1. A railroad corporation is a person within the meaning of the fourteenth amendment declaring that no State shall deprive any person of property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.

"2. A State enactment or regulations made under the authority of a State enactment establishing rates for the transportation of persons or property by railroad that will not admit of the carrier earning such compensation as under all the circumstances is just to it and to the public would deprive such carrier of its property without due process of law, and deny to it the equal protection of the laws, and would therefore be repugnant to the fourteenth amendment of the Constitution of the United States.

"3. While rates for the transportation of persons and property within the limits of a State are primarily for its determination, the question whether they are so unreasonably low as to deprive the carrier of its property without such compensation as the Constitution secures, and therefore without due process of law, cannot be so conclusively determined by the legislature of the State or by regulations adopted under its authority that the matter may not become the subject of judicial inquiry."

In approaching the consideration of this case, guided by the above principles of law, the court fully appreciates the difficulty and embarrassment which surrounds the decision of a question where it is sought to have the court declare the legislative action of a State unconstitutional, and where the decision of the facts involved requires the exercise of knowledge with which courts of justice are presumed to have but little acquaintance.

It is now settled law that a State, by legislative enactment, may directly itself or through a board of commissioners establish rates and fares for the carriage of freight and passengers between points within its limits. This being an exercise of lawful legislative authority on the part of the State, all acts in pursuance thereof, either by the State directly or by its commissioners, must be presumed until the contrary clearly appears to be within the legislative authority and valid.

It necessarily follows, also, that when a board of railroad commissioners authorized by a law of the State to fix rates and fares for the carriage of freight and passengers within its limits fixes those rates, that those rates and fares are *prima facie* reasonable and just, and it is also provided by the act of the legislature under which the defendants are claiming to act that the rates and fairs established by them, or any schedule of such rates and fares, shall be *prima facie* evidence that the rates are reasonable and just in any controversy where they shall come in question.

It thus appears that the burden of proof is upon the complainant to establish beyond a reasonable doubt that the rates and fares which the defendants are seeking to put in force will, if lawfully made and

promulgated, result in the taking of complainant's property without due process of law, and will deprive the complainant of the equal protection of the law. In other words, the complainant must show to the court that the acts of the defendant commissioners are unconstitutional as being in conflict with the Constitution of the United States.

While it is true that the legislature of a State may not under its power to regulate rates and fares for the carriage of freight and passengers within its limits deprive the complainant or any other person or corporation of its property without due process of law, or deprive it or any other person of the equal protection of the laws, it is also equally true that this court has no power or authority, given by statute or common law, to fix rates and fares for the carriage of freight and passengers upon the complainant's lines, or to revise in any manner rates established by the defendants as railroad commissioners. The court only has the power and jurisdiction to declare acts of the legislature or of the board of railroad commissioners performed in pursuance thereof unconstitutional if clearly in conflict with the Constitution of the United States. No court will declare an act of a legislature unconstitutional without it is shown to be so beyond a reasonable doubt.

This, then, gives the status of the complainant in this action before this court. This court must be satisfied beyond a reasonable doubt that the schedule of rates proposed to be promulgated and put in force by the railroad commissioners, the defendants in this action, will, if so put in force, deprive the complainant of its property without due process of law, or deprive it of the equal protection of the law.

We now come to consider the evidence which has been reported in this action, upon which it is asked that this court issue a permanent injunction against the defendants as railroad commissioners enjoining them from putting into force the rates and fares complained of.

The first contention of the complainant is that the record shows that during the fiscal years ending June 30, 1894, 1895, 1896, and 1897 the complainant, under the rates and fares which are now in force upon its system for the carriage of freight and passengers, was not able to earn sufficient money to pay its operating expenses in the State of South Dakota, its taxes in the State of South Dakota, and the interest due upon the bonded debt upon that portion of its lines located within the State of South Dakota, and that there was a deficiency between the earnings in the State of South Dakota from all sources during the said years and the operating expenses, taxes, and interest of said years of $2,729,858.81, being $507,080.52 for the fiscal year ending June 30th, 1894; $841,500.89 for the year ending June 30th, 1895; $773,343.41 for the year ending June 30th, 1896, and $607,933.99 for the fiscal year ending June 30th, 1897.

If it is the law that the power of the State to regulate fares and rates for the carriage of passengers and freight within its jurisdiction

does not arise or become operative until some railroad corporation has paid all the debts it may have seen fit to contract, or paid all the expenses which it is pleased to charge to the account of operating expenses, then the power in the State to regulate rates and fares is worthless and of no avail to prevent the exaction of exorbitant charges from the public for the services rendered. This cannot be the law. No court has yet held it to be the law, and it is not believed any court will ever be found which will hold it to be the law. Such a proposition violates the rules of common sense, and is maintained with a seeming forgetfulness that the power of the State to regulate the rates and fares for the carriage of freight and passengers cannot be contracted away and rendered nugatory by contracts between third parties to which the State has never consented to become a party.

The case of Smyth *v.* Ames, *supra*, did not decide as to just how much a railroad corporation or any other person or corporation could earn before the State would have a right to reduce the rates and fares for the carriage of passengers and freight within its limits. It did say that just how such compensation may be ascertained and what the necessary elements are in such an inquiry would always be an embarrassing question; and in the case of Covington & Lexington Turnpike Road Co. *v.* Sanford, 164 U. S., 578, the Supreme Court said: "Each case must depend upon its special facts; and when a court, without assuming itself to prescribe rates, is required to determine whether the rates prescribed by the legislature for a corporation controlling a public highway are, as an entirety, so unjust as to destroy the value of its property for all the purposes for which it was acquired, its duty is to take into consideration the interests both of the public and of the owner of the property, together with all other circumstances that are fairly to be considered in determining whether the legislature has, under the guise of regulating rates, exceeded its constitutional authority and practically deprived the owner of property without due process of law. * * * The utmost that any corporation operating a public highway can rightfully demand at the hands of the legislature, when exerting its general powers, is that it receive what, under all the circumstances, is such compensation for the use of its property as will be just, both to it and to the public."

In regard to whether the contention of the complainant that it has a right to earn enough to pay all of its fixed charges, operating expenses, and taxes before the right of the State to interfere becomes operative, the Supreme Court, in the case of Smyth *v.* Ames, 169 U. S., 543, says:

"In the discussion of this question the plaintiffs contended that a railroad company is entitled to exact such charges for transportation as will enable it at all times, not only to pay operating expenses, but also to meet the interest regularly accruing upon all its outstanding obligations and justify a dividend upon all its stock, and that to prohibit it from maintaining rates or charges for trans-

portation adequate to all those ends will deprive it of its property without due process of law and deny to it the equal protection of the laws. This contention was the subject of elaborate discussion, and, as it bears upon each case in its important aspects, it should not be passed without examination.

"In our opinion, the broad proposition advanced by counsel involves some misconceptions of the relations between the public and a railroad corporation. It is unsound in that it practically excludes from consideration the fair value of the property used, omits altogether any consideration of the right of the public to be exempt from unreasonable exactions, and makes the interests of the corporation maintaining a public highway the sole test in determining whether the rates established by or for it are such as may be rightfully prescribed as between it and the public. A railroad is a public highway, and none the less so because constructed and maintained through the agency of a corporation depriving its existence and powers from the State. Such a corporation was created for public purposes. It performs a function of the State. Its authority to exercise the right of eminent domain and to charge tolls was given primarily for the benefit of the public. It is under governmental control, though such control must be exercised with due regard to the constitutional guarantees for the protection of its property. Olcott *v.* The Supervisors, 16 Wall., 678, 694; Sinking Fund Cases, 99 U. S., 700, 719; Cherokee Nation *v.* Southern Kansas Railway, 135 U. S., 641, 657. It cannot, therefore, be admitted that a railroad corporation, maintaining a highway under the authority of the State, may fix its rates with a view solely to its own interests, and ignore the rights of the public. But the rights of the public would be ignored if rates for the transportation of persons or property on a railroad are exacted without reference to the fair value of the property used for the public, or the fair value of the services rendered, but in order simply that the corporation may meet operating expenses, pay the interest on its obligations, and declare a dividend to stockholders.

"If a railroad corporation has bonded its property for an amount that exceeds its fair value, or if its capitalization is largely fictitious, it may not impose upon the public the burden of such increased rates as may be required for the purpose of realizing profits upon such excessive valuation or fictitious capitalization, and the apparent value of the property and franchises used by the corporation, as represented by its stocks, bonds, and obligations, is not alone to be considered when determining the rates that may be reasonably charged. What was said in Covington & Lexington Turnpike Road Co. *v.* Sanford, 164 U. S., 578, 596–'7, is pertinent to the question under consideration. It was there observed: 'It cannot be said that a corporation is entitled, as of right and without reference to the interests of the public, to realize a given per cent. upon its capital stock. When the question arises whether the legislature has exceeded its constitutional power in prescribing rates to be charged by

a corporation controlling a public highway, stockholders are not the only persons whose rights or interests are to be considered. The rights of the public are not to be ignored. It is alleged here that the rates prescribed are unreasonable and unjust to the company and its stockholders; but that involves an inquiry as to what is reasonable and just for the public. * * * The public cannot properly be subjected to unreasonable rates in order simply that stockholders may earn dividends. The legislature has the authority in every case where its power has not been restrained by contract to proceed upon the ground that the public may not rightfully be required to submit to unreasonable exactions for the use of a public highway established and maintained under legislative authority. If a corporation cannot maintain such a highway and earn dividends for stockholders, it is a misfortune for it and them, which the constitution does not require to be remedied by imposing unjust burdens upon the public. So that the right of the public to use the defendant's turnpike upon payment of such tolls as in view of the nature and value of the services rendered by the company are reasonable is an element in the general inquiry whether the rates established by law are unjust and unreasonable.'

"A corporation maintaining a public highway, although it owns the property it employs for accomplishing public objects, must be held to have accepted its rights, privileges, and franchises subject to the condition that the government creating it or the government within whose limits it conducts its business may by legislation protect the people against unreasonable charges for the services rendered by it. It cannot be assumed that any railroad corporation accepting franchises, rights, and privileges at the hands of the public ever supposed that it acquired or that it was intended to grant to it the power to construct and maintain a public highway simply for its benefit, without regard to the rights of the public; but it is equally true that the corporation performing such public services and the people financially interested in its business and affairs have rights that may not be invaded by legislative enactment in disregard of the fundamental guarantees for the protection of property. The corporation may not be required to use its property for the benefit of the public without receiving just compensation for the services rendered by it."

This being the latest announcement by the Supreme Court upon this question, it must be taken as the law, and nowhere can it be gathered from its language that the complainant has a right to pay all of its fixed charges before the State can regulate its charges for the carriage of passengers and freight. The court therefore dismisses the proposition that the defendant railroad commissioners cannot reduce the present schedule of rates and charges now in force upon the complainant's lines merely because it is shown that the earnings therefrom do not pay the indebtedness and operating expenses of the complainant, as the complainant company itself never seems to have been able to adopt a schedule

that would accomplish that object, nor in face of the record can the complainant claim that it ever adopted a schedule of rates and fares upon its lines within the State of South Dakota which were based upon the value of the services rendered. Mr. Bird, general traffic manager of the complainant, a witness for the complainant, when upon the stand, testified as follows:

"I testified this morning that I had been in the service somewhat over thirty years, and had been engaged in making rates during that time, and I never have yet had an opportunity of making a tariff on a basis of what the service was worth. I have never had the opportunity to determine the rate by the value of the services. The rates are made what they must be."

The Supreme Court in the case of Smyth *v.* Ames, 169 U. S., 546, declared as follows: "We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public; and in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

Here is the rule, and the only question for the court now to ascertain is, "What is the fair present value of the railroad property used by the complainant in the State of South Dakota upon which it is entitled to earn what the services rendered are reasonably worth?"

There is no direct testimony in the record as to the present value of the complainant's railroad property in the State of South Dakota. There is testimony as to the original cost of rolling stock bought years ago; there is testimony as to the original cost of steel rails bought years ago, and there is the estimated cost of a good many articles of property by the officers of the company, but in no case does any witness swear to the present actual value of any piece of property owned and operated in the State of South Dakota by the complainant company. The only way that the court can get at the reasonably fair value of the complainant's property used and operated as aforesaid is by estimating, I might say guessing, just as the witnesses of the complainant have estimated and guessed as to its value. The court was inclined at one time to be of the opinion that it was unable from the testimony to ascertain what the fair present value of the complainant's property in South Dakota was,

in view of the conflicting statements of witnesses called upon that question and the great disparity between the value of the property fixed by the company for the purpose of this suit and the value of the same property fixed for purposes of taxation, but the court has carefully examined the testimony introduced in regard to the value of the property in question, and after considering all the circumstances and incidents, under the rules of the Supreme Court which should govern the court in fixing the value, the court is unable to find that the present fair value of the complainant's property in the State of South Dakota used for railroad purposes is to exceed ten million of dollars. It is true that the record shows that the property is bonded and mortgaged for an amount largely in excess of this sum, but the amount of a mortgage upon property is no evidence of its value, and therefore is not worthy of consideration. Neither is the fact that a railroad company bought engines at a certain price ten or fifteen years ago any binding evidence that the engines now are worth a dollar, in the absence of any testimony as to where they have been used, how they have been kept, and what their present condition is. The record fairly shows that it is not the new property of the complainant company that is used in South Dakota. This being fixed by the court as the fair and reasonable value of the complainant's railroad property, what would be a reasonable sum for it to charge for the services which it renders to the public? The Supreme Court, in the case cited, says that the State, in fixing its schedule of rates and fares for the transportation of passengers and freight, cannot consider and charge against the company its interstate earnings. We are compelled to adopt this mode of proceeding, because it is the law prescribed by a court which makes the law for this court; and while the complainant company strenuously insists upon the enforcement of this rule, it as vigorously insists that the per cent. which the State may allow the complainant to earn must be figured upon the total value of its property, because all the business in the State of South Dakota transacted by the complainant is local business, with the exception of an occasional train of cattle from Chamberlain or an occasional train of wheat from Eureka, and that therefore all the cost of operation should be charged to the local earnings. In other words, that although for the four fiscal years ending June 30th, 1894, 1895, 1896, and 1897 respectively, the interstate earnings in the State of South Dakota were $4,026,682.21, still the State cannot charge against the road these interstate earnings, but may charge against the road its local earnings, the percentage of local earnings to be figured on the total value of the property, thus leaving the interstate earnings relieved from any burden. Is this fair? Is it just for the company to say to the State of South Dakota that "while it is true that in the four years mentioned we have earned on interstate business in the State of South Dakota the sum of $4,026,682.21, still you cannot charge that against us, but you can only charge your local earnings figured on the total valuation of our property

($10,000,000), and that local earnings are such a small percentage of the total value of the railroad in South Dakota that it does not give the company what the services are reasonably worth?"

The argument for the company is that the court cannot separate the value of the property with reference to the earnings, because it requires all the property and all the machinery and all the labor to earn the local earnings. Admitting this to be so, it still remains that during the years which the court has mentioned the company earned, in interstate business by the use of this property and under the franchises granted to it by the State of South Dakota, the sum of $4,026,682.21; so that it is entirely unjust to make the local earnings bear the whole burden by ascertaining the per cent. of the total valuation that the local earnings would produce.

No court as yet has promulgated any rule as to how this court shall arrive at a true and just valuation upon which to figure local earnings. In the absence of any such rule, this court believes that it is fair and just to first ascertain what per cent. of the total gross earnings in any one year the total local earnings are for that year, and, having ascertained that per cent., to take the same per cent. of the total value of the property as a fair value upon which to fix local earnings. Following out this rule, let us take the four fiscal years immediately prior to the institution of this suit and ascertain what per cent. the local earnings for these years would have earned upon a valuation thus determined and what reduction of that percentage will be made by the schedule sought to be promulgated by the defendants and which it is stated reduces the present tariff of complainant, speaking in round numbers, of fifteen per cent. on local passenger business and seventeen per cent on local freight business. The total earnings from all sources of the complainant company on its lines in the State of South Dakota for the fiscal year ending June 30th, 1894, was $1,840,651.79. The total local earnings for freight and passenger services during the same period was $407,606.35. In round numbers this would make the local earnings 22% of the gross earnings from all sources for the year 1894. 22 per cent. of $10,000,000.00, the value of complainant's property in the State of South Dakota, would be $2,200,000. The local earnings for said year, stated above as $407,606.35, using round numbers, would be eighteen and $\frac{5}{10}$ per cent. on said last-mentioned sum.

The total earnings, from all sources, of the complainant company, on its lines in the State of South Dakota, for the fiscal year ending June 30th, 1895, were $1,236,680.78. The total local earnings for freight and passenger services during the same period were $330,642.85. In round numbers, this would make the local earnings 26 per cent. of the gross earnings from all sources for the year 1895. 26 per cent. of $10,000,000.00, the value of the complainant's property in the State of South Dakota, would be $2,600,000. The local earnings for said year, stated above as $330,642.85, using round numbers, would be twelve and $\frac{7}{10}$ per cent. on said last-mentioned sum.

The total earnings from all sources for the fiscal year ending June 30th, 1896, were $1,557,100.60. The total local earnings for freight and passenger service during the same year were $328,105.95. In round numbers this would make the local earnings 21 per cent. of the gross earnings from all sources for the year 1896. 21 per cent. of $10,000,000, the value of complainant's property in the State of South Dakota, would be $2,100,00–. The local earnings for said year, $328,105.95, using round numbers, would be fifteen and $\frac{6}{10}$ per cent. on said last-mentioned sum.

The total earnings from all sources for the fiscal year ending June 30th, 1897, were $1,605,210.66. The total local earnings from freight and passenger services during the same period were $311,005.42. In round numbers this would make the local earnings 19 per cent. of the gross earnings from all sources for the year 1897. 19 per cent. of $10,000,000, value of complainant's property in the State of South Dakota, would be $1,900,000. The local earnings for 1897, $311,005.42, using round numbers, would be 16.3 per cent. on the last-mentioned sum.

It will thus be seen that the local earnings of the complainant's lines on the same proportion of the total value of the road as the local earnings bear to the gross earnings from all sources in South Dakota were:

For the year 1894	18.5 %
For the year 1895	12.7 %
For the year 1896	15.6 %
For the year 1897	16.3 %

Now, let us ascertain the per cent. which the local earnings of the road for the four years mentioned would produce on the proportionate valuation above stated after being reduced by the proposed schedule of the railroad commissioners:

For the year 1894 the total local freight earnings were $137,459.88, which, being reduced 17 %, would equal.	$114,091.70
For the same year the total local passenger earnings were $270,146.47, which, reduced 15 per cent., would equal	229,624.50
These reduced local freight and passenger earnings equal	$343,716.20

This reduction on the local business would reduce the total earnings from all sources from $1,840,651.79 to $1,776,761.64, of which amount the reduced local earnings for the year 1894 would be, in round numbers, 19 per cent.; 19 per cent. of $10,000,000 would be $1,900,000, and the local earnings, as reduced, would be 18 per cent. of that amount.

For the year 1895 the total local freight earnings were $121,442.00, which, being reduced 17 %, would equal	$100,796.86
For the same year the total local passenger earnings were $209,200.85, which, being reduced 15 per cent., would equal	177,820.72
Total reduced local freight and passenger earnings	$278,617.58

This reduction on the local business would reduce the total earnings from all sources for that year from $1,236,680.78 to $1,184,655.51, of which amount the reduced local earnings for the year 1895 would be, in round numbers, 23 per cent.; 23 per cent. of $10,000,000 would be $2,300,000, and the local earnings for that year, as reduced, would be 12.1 per cent. of that amount.

For the year 1896 the total local freight earnings were $110,432.45, which, being reduced 17 %, would equal	$91,660.93
For the same year the total local passenger earnings were $217,673.50, which, reduced 15 per cent., equal	185,022.47
Total reduced local freight and passenger earnings	$276,683.40

This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,557,100.60 to $1,505,678.05, of which amount the reduced local earnings for the same year would be, in round numbers, 18 per cent., and 18 per cent. of $10,000,000 would be $1,800,000, and the local earnings for that year, as reduced, would be 15.3 per cent. of that amount.

For the year 1897 the total local freight earnings were $102,289.23, which, being reduced 17 %, would equal	$84,900.06
For the same year the total local passenger earnings were $208,716.19, which, being reduced 15 per cent., equal	177,408.76
Total reduced freight and passenger earnings	$262,308.82

This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,605,210.66 to $1,556,514.06, of which amount the reduced local earnings for the same year would be, in round numbers, 16 per cent. 16 per cent. of $10,000,000 would be $1,600,000, and the local earnings for that year, as reduced, would be 16.2 per cent. of that amount.

It will be thus seen that if the commissioners' schedule of rates and fares had been in effect during the four years that we have con-

sidered there would have been an earning on the value of the property apportioned to local earnings of—

18.0 per cent. for the year ending June 30, 1894.
12.1 " " " " " " June 30, 1895.
15.3 " " " " " " June 30, 1896.
16.2 " " " " " " June 30, 1897.

It certainly would be impossible for this court to find, beyond a reasonable doubt, that these per cents. allowed to be earned by the railroad company for local earnings would be depriving it of its property without due process of law, or depriving it of the equal protection of the laws.

This being the view of the court, it necessarily results that the bill must be dismissed and the temporary restraining order, granted in this action, dissolved.

(Endorsed:) Chicago, Milwaukee and St. Paul R'y Co. *vs.* Wm. Tompkins *et als.* Opinion of court. Filed July 6th, 1898. Oliver S. Pendar, clerk.

UNITED STATES OF AMERICA, *ss:*

Circuit Court of the United States, District of South Dakota, Southern Division.

I, Oliver S. Pendar, clerk of said circuit court, do hereby certify and return to the honorable the Supreme Court of the United States of America that the foregoing, consisting of 1,053 pages, numbered consecutively from A to G, inclusive, and from I to XLII, inclusive, and from 1 to 999, inclusive, is a true and complete transcript of the report of the special examiner (which includes the pleadings and proofs), orders and final decree, together with the opinion of the court and the proceedings in the matter of the appeal to the Supreme Court, and the stipulation in reference to this transcript, in the cause wherein The Chicago, Milwaukee & St. Paul Railroad Company is the complainant and Wm. H. Tompkins, W. T. La Follette, and Alexander Kirkpatrick, constituting the board of railroad commissioners of the State of South Dakota, *et als.*, are the defendants, and of the whole thereof, as appears from the original records and files of said court; and I do further certify and return that I have included within said transcript and within said paging the order made in open court allowing this appeal, in the presence of the solicitors of said defendants.

Seal Circuit Court of the United States, District of South Dakota, Sioux Falls.

In witness whereof I have hereunto set my hand and affixed the seal of said court, at Sioux Falls, in the district of South Dakota, this 3rd day of September, A. D. 1898.

OLIVER S. PENDAR, *Clerk.*

[Ten-cent U. S. internal-revenue stamp, canceled 9, 3, '98, O. S. P.]

In the Supreme Court of the United States of America.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Appellants,
vs.
WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, and ALEXANDER Kirkpatrick, Constituting the Board of Railway Commissioners of the State of South Dakota, Appellees.

It is hereby stipulated and agreed by and between the parties hereto that in printing the records for hearing in this case the clerk of the Supreme Court of the United States shall print only the opinion of the court, the decree, assignment of errors, petition for appeal, bond on appeal, order allowing appeal, and the record of the circuit court of the United States for the district of South Dakota, relating to this appeal, and shall have the portions so printed inserted after the volume of pleadings and proof printed for use in the said circuit court and furnished the clerk of this court.

It is further stipulated and agreed that no other portions of the records herein shall be printed, and that the case shall be submitted to the court on the record so prepared as aforesaid.

GEO. R. PECK AND
A. B. KITTREDGE,
Appellants' Solicitors.
T. H. NULL &
W. O. TEMPLE,
Appellees' Solicitors.

[Endorsed:] Supreme Court of the United States. Chicago, Milwaukee and St. Paul Railway Co., complainant and appellant, *vs.* Wm. H. Tompkins *et als*, constituting the board of railway commissioners of the State of South Dakota, defendants and appellees. Stipulation as to printing. George R. Peck and A. B. Kittredge, att'ys for appellant.

[Endorsed:] Case No. 16,981. Supreme Court U. S., October term, 1898. Term No., 396. Chicago, Milwaukee & St. Paul Railway Co., app'ts, *vs.* Wm. H. Tompkins *et al.* Stipulation as to printing record. Office Supreme Court U. S. Filed Oct. 11, 1898. James H. McKenney, clerk.

Endorsed on cover: Case No. 16,981. S. Dakota C. C. U. S. Term No., 396. The Chicago, Milwaukee & St. Paul Railway Company, appellant, *vs.* William H. Tompkins, W. T. La Follette, & Alexander Kirkpatrick, constituting the board of railroad commissioners of the State of South Dakota, *et al.* Filed September 12, 1898.

No. 131.

Brief of Peck v Kittredge for Appl

Office Supreme Court U. S.
FILED
OCT 24 1899
JAMES H. McKENNEY,
Clerk.

Filed Oct. 24, 1899.

Supreme Court of the United States.

OCTOBER TERM, A. D. 1899.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Appellant,

vs.

WILLIAM H. TOMPKINS, W. T. LaFOLLETTE and ALEXANDER KIRKPATRICK, Constituting the Board of Railroad Commissioners of the State of South Dakota, et al.

No. ~~200~~. 131

BRIEF AND ARGUMENT FOR APPELLANT.

GEORGE R. PECK,
A. B. KITTREDGE,
SOLICITORS FOR APPELLANT.

The Gunthorp-Warren Printing Company, 53 Dearborn St., Chicago.

IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1899.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Appellant,

vs.

WILLIAM H. TOMPKINS, W. T. LaFOLLETTE and ALEXANDER KIRKPATRICK, Constituting the Board of Railroad Commissioners of the State of South Dakota, et al.

STATEMENT OF THE CASE.

This is a suit brought by the Chicago, Milwaukee and St. Paul Railway Company against the defendants, William H. Tompkins, W. T. La Follette and Alexander Kirkpatrick, constituting the Board of Railroad Commissioners of the State of South Dakota. The bill was filed August 27, 1897, and its object was to enjoin the defendants from putting into effect certain proposed reductions in the rates of complainant for carrying freight and passengers in the State of South Dakota. The bill alleged that the then existing rates charged by complainant in South Dakota were just and reasonable; that the

rates promulgated by the defendants were unjust and unreasonable; that they would not afford complainant adequate compensation for the service to be performed, and that the order of the commissioners if enforced would operate to take complainant's property without just compensation, without due process of law, and would deprive complainant of the equal protection of the laws. A temporary injunction was allowed upon the filing of the bill, and the defendants answered, traversing the allegations of the bill, insisting that the proposed rates were just and reasonable and alleging that complainant's existing rates were unjust and unreasonable. Upon these issues testimony was taken and the case submitted at the April term, 1898, of the Circuit Court of the United States for the District of South Dakota, and a decree entered July 20, 1898, dismissing the bill. Complainant appealed to this court.

The evidence is voluminous, as in such cases it must necessarily be. It consists largely of statistical information gathered from the books and records of the complainant company, and of the testimony of witnesses familiar with railway operation. These all appear in the record and will be alluded to in the course of the argument.

SPECIFICATION OF ERRORS.

The decree of the court below is erroneous in the following respects:

1. In finding, adjudging and decreeing that the value of complainant's property in the State of South Dakota is $10,000,000.

2. In finding, adjudging and decreeing that "the fair value of the proportion of the complainant's said property assignable to local traffic was, for the year ending June 30th, 1894, $2,200,000, and for the year ending June 30th, 1895, $2,600,000, and for the year ending June 30th, 1896, $2,100,000, and for the year ending June 30th, 1897, $1,900,000."

3. In finding, adjudging and decreeing that "the local earnings of the complainant's lines under existing tariffs on the same proportion of the total value of the road in South Dakota as the local earnings bear to the gross earnings from all sources in South Dakota were:

For the year 1894, 18.5 per cent.
For the year 1895, 12.7 per cent.
For the year 1896, 15.6 per cent.
For the year 1897, 16.3 per cent."

4. In finding, adjudging and decreeing that "applying the schedule of rates sought to be enjoined in this action to the local traffic during the years above mentioned, on the same method of calculation, the value of complainant's property assignable to local traffic would be for the years ending June 30th, 1894, $1,900,000; June 30th, 1895, $2,300,000; June 30th, 1896, $1,800,000; June 30th, 1897, $1,600,000."

5th. In finding, adjudging and decreeing that "these earnings for the fiscal year 1894 would equal 18 per cent. of the value thus ascertained, and for the year 1895 would equal 12.1 per cent., and for the year 1896 would equal 15.3 per cent., and the year 1897 would equal 16.2 per cent."

6. In finding, adjudging and decreeing that "owing to the small difference between the percentage earned under the complainant's schedule of rates and fares and the commissioners' schedule of rates and fares for the four years prior to the commencement of this suit, and owing further to the amount of the percentages which would have been earned during said four years under the commissioners' schedule, the court is unable to find beyond a reasonable doubt that the local earnings under said commissioners' schedule would not during the years aforesaid have earned the reasonable cost of earning said local earnings and some reward to the owner of the property over and above said cost of operation."

7. In finding, adjudging and decreeing that "the court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896 and 1897 was."

8. In concluding, as a matter of law, and adjudging and decreeing that "the enforcement of the proposed schedule of reasonable maximum rates and fares will not deprive the complainant of its property without due process of law."

9. In concluding, as a matter of law, and adjudging and decreeing that "the enforcement of the proposed schedule of reasonable maximum rates and fares will not deprive the complainant of the equal protection of the laws."

10. In concluding, as a matter of law, and adjudging and decreeing that "the enforcement of the proposed schedule of reasonable maximum rates and fares will not operate to take the property of complainant for public use without just compensation."

11. In ordering, adjudging and decreeing that "the prayer of complainant in its bill of complaint be in all-things denied."

12. In ordering, adjudging and decreeing that "the complainant's bill of complaint be in all things dismissed."

13. In ordering, adjudging and decreeing that "this action be in all things absolutely dismissed."

14. The court erred in its judgment and decree and its decision herein, in that it failed to consider the amount actually and necessarily paid out by the complainant in operating expenses to earn the moneys received on account of local traffic.

BRIEF AND ARGUMENT.

The question submitted to the court below, though its determination involved the consideration of many facts and figures, was, and since the decision of this court in *Smyth* v. *Ames*, 169 U. S., 466, has been, essentially a simple one. It required no particular skill when the facts were known to draw the correct legal conclusion, for the principles governing this class of cases are well settled and understood. The power of a state to regulate the rates to be charged by common carriers on business within that state is not, and cannot be, questioned. But the power to regulate rates and the power to establish rates go only to the extent of establishing such rates as are just and reasonable to the public and to the carrier. In *Smyth* v. *Ames*, *supra*, Mr. Justice HARLAN, speaking for this court, summarized the principles involved, and laid down three propositions which he said "must be regarded as settled":

"**1. That a railroad corporation is a person within the meaning of the Fourteenth Amendment.** * * *

2. A state enactment, or regulations made under the authority of a state enactment, establishing rates for the transportation of persons or property by railroad, that will not admit of the carrier earning such compensation as under all the circumstances is just to it and to the public, would deprive such carrier of its property without due process of law and deny to it the equal protection of the laws, and would therefore be repugnant to the Fourteenth Amendment of the Constitution of the United States.

3. While rates for the transportation of persons and property within the limits of a state are primarily for its determination, the question whether they are so unreasonably low as to deprive the carrier of its prop-

erty, without such compensation as the Constitution secures, and therefore without due process of law, cannot be so conclusively determined by the legislature of the state, or by regulations adopted under its authority, that the matter may not become the subject of judicial inquiry."

The question, therefore, with which the court below had to deal was, whether the rates established by the Board of Railroad Commissioners of South Dakota would admit of the complainant earning such compensation as, under all the circumstances, would be just to it and to the public. The limit of legislative power is reasonableness. Rates are reasonable when they secure to the carrier a just compensation for services performed. This is all the public is entitled to demand, and this the state may secure by appropriate legislation. As to the legal aspects of the case, there is little room for discussion. We shall show that the court below failed to perceive the necessary legal effect of the facts established, and, therefore, its decision was palpably and plainly wrong.

The Opinion of the Court Below.

The opinion of the learned judge who heard the case is embraced in the record, and at the beginning of the discussion, we beg to call the attention of the court to it. It contains a statement of certain familiar principles which had been established by this court, and which were properly adopted by the learned judge. But the error which pervades the opinion is not so much in what it contains as in what it omits. It is a universal rule, that in considering the reasonableness of a rate the amount of gross money earned by the carrier is one element, and the amount expended by the carrier in

earning it, is another. Before the gross money can become net money, the operating expenses must be paid. Whatever is left, if anything, stands for gain or reward. All this has been frequently pointed out by this court, and, indeed, is so plain and elemental that it is invariably acted upon. Every good business man carefully adjusts his affairs so as to secure such a relation between earnings and expenses as to give him some reward for his labor and for his investment. And yet, the learned judge below, within a few months after the decision of this court in *Smyth* v. *Ames*, having before him the opinion of Mr. Justice HARLAN, which clearly pointed out the elements that must necessarily be considered, proceeded to make his computations upon gross earnings alone, and decided the case upon them without so much as alluding to operating expenses. The opinion speaks for itself; and we venture to say that no court, no lawyer and no business man can read it without being struck by the omission.

Certain cases similar to this were pending in the Circuit Court of the United States for the District of North Dakota when this case was decided. The hearing in the *North Dakota* cases was before Judges THAYER and AMIDON, and we beg to quote from the opinion, filed December 23, 1898, written by Judge AMIDON, and concurred in by Judge THAYER:

"Counsel for defendants cites as directly in point a recent decision of the United States Circuit Court for the District of South Dakota, in the case of *Railway Co.* v. *Tompkins*, 90 Fed. Rep., 363, which involved substantially the same issues as the cases under consideration. There can be no criticism of the law as declared in the opinion in that case, but the learned judge seems to have proceeded upon a fundamental error of fact. In determining the rate of income which the company was earning upon the value of its property as fixed by the court,

no allowance whatever is made for operating expenses, but the entire gross receipts of the road are treated as net profits. This error greatly weakens if it does not destroy the authority of the opinion."

Railway Co. v. *Keyes et al.*, 91 Fed Rep., 47.

Undoubtedly weight should be given to the deliberate opinion of a court which has heard a case, and, being fully conversant with the facts, has applied the settled law to them. Under such circumstances, it may be fairly said that there is a presumption in favor of the correctness of the decision, but when the court, making up its own record of the reasons upon which the decision is based, informs all who read the opinion that it has overlooked and ignored the most essential fact in the case, the presumption is not in favor of but against the correctness of the decision. The question of operating expenses is, as Judge Amidon well said, a fundamental one. It is simply an impossibility to reach an intelligent conclusion in a case of this kind without considering them.

The vital question in the case is one of reward—whether the rates established by the Board of Commissioners will give to complainant such reward as under the constitution of the United States it is entitled to have for the service it performs. But how can the question of reward be determined until it is known by subtracting the expenses from the receipts, how much is left? It is, therefore, indispensable that not only the gross earnings, but the operating expenses, be considered in determining the adequacy of the reward.

If the method adopted by the court below was the correct one, it follows that this court wasted much valuable time in *Smyth* v. *Ames* in its elaborate discus-

sion of operating expenses and the relation between local expenses and expenses on through business. The court below in the present case made figures to show that complainant earned large percentages upon the capital invested in local business, but took no notice whatever of the money expended in earning such percentages. As Judge Amidon observed, with the concurrence of Judge Thayer, *supra:* "The entire gross receipts of the road are treated as net profits." This case is, therefore, to be heard here with little if any aid from the investigation made by the court below. A case is practically as if it had not been heard, when the court has overlooked or forgottten the main fact necessary to be found. Operating expenses may be large or they may be small, but it is perfectly certain that whatever they are they must be deducted from gross earnings before any idea can be formed as to the results of the business. The court found a certain value for the property in South Dakota, namely, ten millions of dollars. It assigned a certain proportionate share of it to local business; it ascertained the gross earnings on the local business, and treated that sum as the net result from local operations within the state. It figured out the percentage of these gross earnings to the value of the property, and also figured out the reduction in earnings which would result if the commissioners' rates were put in force, and then dismissed the consideration of the issues with the remark:

"It certainly would be impossible for this court to find *beyond a reasonable doubt* that these per cents allowed to be earned by the railroad company for local earnings would be depriving it of its property without due process of law or depriving it of the equal protection of the laws."

In this sentence the court reveals the erroneous

method by which its conclusions were reached: First, by treating gross earnings as net profits, and secondly, by holding that complainant must convince the court in such a suit as this, "beyond a reasonable doubt." The doctrine of proof beyond a reasonable doubt is a most valuable safeguard of personal rights in criminal prosecutions, but it has no application in this case. Bills for injunctions must be supported by clear and convincing evidence, and if the injunction seeks to restrain the act of a public administrative body it must be shown that the act complained of is clearly repugnant to the rights of the party seeking the relief. This, however, is a comparatively unimportant error. The great error which overshadows all others and which enters into every computation and every conclusion of the court, is the omission of operating expenses from consideration. They were not only not included in the mathematical calculations upon which the decision is based, but they were not even incidentally referred to.

It is difficult to understand how a court could fall into so strange an error as to speak of the gross earnings as "these percents allowed to be earned by the railroad company for local earnings." The percentages the court was speaking of were simply the percentages of gross revenue received by the company from local business. They were not the sums "allowed to be earned;" for the sums allowed to be earned under any rate are only such as may be left after paying operating expenses. No court has ever before held that the reasonableness of a rate could be determined by the amount of gross earnings under it. The only reason for considering gross earnings at all is for the purpose of ascertaining the net earnings, for it is to the net earnings that the court must look in determining whether a rate is just or not.

The Case on Its Merits.

Following the rule laid down by this court in *Smyth* v. *Ames*, *supra*, the questions to be discussed are as follows:

First. The gross earnings from local business.

Second. The operating expenses on local business.

Third. The reductions proposed by the Commissioners.

Fourth. The fair value of the property.

I.

Upon the first question, the evidence is clear and without dispute. Complainant's evidence gave the amount of gross local earnings in South Dakota for the fiscal years ending June 30, 1894, 1895, 1896 and 1897. No attempt was made to show that these figures were erroneous; they were conceded to be correct by the defendants and were adopted by the court identically as given by complainant. They are as follows:

	Freight	Passengers.
Year ending June 30, 1894,	$137,459.88	$270,146.47
" " " " 1895,	121,442.00	209,200.85
" " " " 1896,	110,432.45	217,673.50
" " " " 1897,	102,289.23	208,716.19

(See Exhibit No. 8, page 25 of the record.)

II.

(a) The question of operating expenses follows, and must necessarily follow the question of gross local earnings. How much was the company required to expend in securing its gross local earnings? is the inquiry presented. In disposing of it, the court, as shown above, simply ignored it altogether. But if the court had seen fit to give operating expenses their due and proper place in the consideration of the case, it would have been found that there was no uncertainty or reasonable controversy in respect to them. Complainant submitted ample, satisfactory and uncontradicted testimony, by the precise method pointed out in *Smyth* v. *Ames*. It was, as the record shows, far more complete and conclusive than the testimony upon which this court based its decision in that case. It showed with absolute precision and certainty what the operating expenses of complainant's system were for four years prior to the filing of the bill, and then it showed by the testimony of expert witnesses the largely increased cost of conducting local business over that of conducting through business, and over system business.

The proof discloses that the complainant has always kept an accurate account of its earnings and operating expenses as a system. Its earnings are ascertained from reports made by its agents and conductors and by the agents of other roads with which it transacts a joint business. The conductors make trip reports of the business done and the agents report freight forwarded and to what points, freight received and from what points, and the amount received from the sale of tickets. These reports

are compared with each other, verified and tabulated, and from them the earnings from all sources are exactly determined. When the gross earnings have been so ascertained and tabulated, a railroad company knows how much money it has collected or received, but it does not know how much of it it has saved. In other words, it does not know what the net result of its operations has been.

It must, therefore, ascertain its operating expenses. It would be a curious ledger account in any kind of business which should show on one side the moneys received and show nothing on the opposite side as to the moneys laid out and expended. This, however, is precisely what the court below did in its computations.

The entire operating expenses of a railroad system can be as readily ascertained at the end of the year, or of a given period, as can its gross earnings. Throughout the discussion it will be necessary for the court to distinguish between the operation of the system as a whole and the operation of its local parts. The system is the unit, and the local parts mere subdivisions of it. The operating expenses of a system are ascertained from its pay-rolls, materials purchased and used, rents paid, settlements of personal injury cases, loss and damage to freight, stock killed, fire losses, insurance, taxes and many other outlays which are necessarily made in the conduct of the business. For each item of expense a voucher is made and entered on the books of the company. At the end of each month, year, or any certain period, the company knows exactly what earnings have been received and what expenses have been incurred and paid out in the operation of its system. It has only to subtract one from the other to know what the results of its operations have been.

The earnings and operating expenses of complainant's system for the four fiscal years preceding the filing of the bill appear in Exhibit 7, Rec. p. 18, and were as follows:

	1894	1895	1896	1897
Gross Earning,	$31,327,950 95	$27,335,369 19	$32,681,828 88	$30,486,767 99
Total Expenses,	20,114,332 65	17,043,753 09	19,676,808 04	18,577,539 08
Net Earnings,	$11,213,618 30	$10,291,616 10	$13,005,020 84	$11,909,228 91

Comparing the gross earnings and operating expenses in this exhibit, it will be found that the operating expenses for the system for the four years in question were as follows:

For the year ending June 30, 1894..... 64.21%
" " " " " " 1895..... 62.35%
" " " " " " 1896..... 60.21%
" " " " " " 1897..... 60.94%

(Record, pp. 16 to 23 inclusive.)

These figures show that for each dollar earned on the system, complainant expended

For the year ending June 30, 1894.....64.21 cents.
" " " " " " 1895 .....62.35 cents.
" " " " " " 1896.....60.21 cents.
" " " " " " 1897... ....60.94 cents.

Having ascertained the gross earnings and operating expenses of the entire system we have taken a step in the inquiry, which inquiry is not as to the results of operating the system, but the results of the local operation in the State of South Dakota. Knowing the total operating expenses upon the system, we are to ascertain as nearly as possible the local operating expenses in South Dakota. *No separate account of local operating expenses can be kept by any railroad company, for the reason that*

local businss and through business are often carried upon the same trains, in charge of the same employes, so that the expenses of the service and substantially every element of cost are blended and intermingled But notwithstanding this is so, experience has shown that local operating expenses are much higher than operating expenses on through business, and therefore higher than the operating expenses of a system. This appeared in *Smyth* v. *Ames*, and appears conclusively in this case.

Having ascertained the operating expenses of the system, before a comparison is made between them and the operating expenses local to South Dakota, it is but just that the court should know whether the system operating expenses have been fair and reasonble. If so, they can be used as a basis for estimating the local operating expenses. The proof shows beyond any question, that complainant's railroad has been honestly, judiciously and economically managed and operated.

Mr. Earling, its vice president, who has been connected with the management of its property for more than thirty years, testified as follows:

"I consider that the Chicago, Milwaukee and St. Paul Railway has been efficiently and thoroughly well managed, and in as economical a manner as it was possidle to manage the property and keep it in a safe and proper condition." (Rec., 224.)

Mr. Truesdale, vice president and general manager of the Rock Island and Pacific Railroad, testified:

"Q. I will ask you to state, Mr. Truesdale, whether, in your opinion, based upon your knowledge of the Chicago, Milwaukee and St. Paul Railway, and of the conduct of its operations, whether it has been capably, ecnomically and judiciously managed?

A. There is no question whatever in my mind that

such is the case, and I think that the opinion obtains generally among railroad people that it has been so managed." (Rec., 311.)

Upon the same subject, Mr. C. H. Chappell, vice president and general manager of the Chicago and Alton Railroad Company, who has been engaged in railway service for more than forty years, testified:

"Q. I will ask you then to state from your knowledge and acquaintance with the management of the Chicago, Milwaukee and St. Paul Railway, whether in your opinion it has been capably, judiciously and economically managed?

"A. In my opinion the Chicago, Milwaukee and St. Paul Railway is one of the best managed roads in the western country, or in the eastern country.

"Q. If the operating expenses for the year ending June 30, 1897, were 60.94 per cent. of the gross earnings, what would you say as to that being a fair showing of the expense of operating the system?

"A. I should consider it a very excellent showing; it is very difficult to manage any of the Western railways on 60 per cent. of the earnings.

"Q. Would the fact that the operating expenses of the Chicago, Milwaukee and St. Paul Railway were 60.94 per cent. of the gross earnings indicate that it has been a judiciously operated and conducted railroad? A. Yes, sir." (Rec., 338-339.)

Mr. J. T. Harahan, vice president of the Illinois Central Railroad, and engaged in railway service since 1861, testified:

"Q. Well, then, I will ask you to state whether in your opinion based upon your knowledge of the Chicago, Milwaukee and St. Paul Railway, and of the conduct of its operations, it has been judiciously, economically and capably managed?

"A. I believe it has been very ably managed I know a good many of the young men who are connected with it, who are bright, sharp, active young men; and being thrown in with them as much as I have, that is the impression I have formed of them." (Rec., 587.)

Mr. George B. Harris, vice president of the Chicago, Burlington and Quincy Railroad Company, testified:

"I should say that the St. Paul road has been well managed, and has been as economically managed as is possible, consistent with rendering good service and safe service, and substantial maintenance of the property." (Rec., 643.)

It thus conclusively appears that the complainant's railroad is and has been a well managed road, that the best results possible have been secured, and that the expenditures in operation were only such as were necessarily incurred. The defendants produced no evidence upon this subject, and the honesty, capability and economy of complainant's management was not questioned during the taking of the testimony, nor at the hearing in the court below. It may therefore be considered as fully established that the operating expenses of the system as shown by the books of the company for the four years preceding the filing of the bill were not larger than was necessary to the safe and efficient management of the property.

Local Operating Expenses.

(b) That local operating expenses are more than upon the entire business of a system is common knowledge. This was recognized by Mr. Justice Harlan in his opinion in *Smyth* v. *Ames*, and it appears by the testimony of many witnesses in this case, who not only testified that such is the fact, but gave the reasons why it is so.

As above stated, it is not possible to keep a separate account of local operating expenses in South Dakota, or any other state, for the reason that local and inter-state traffic are frequently carried upon the same trains and in

charge of the same employes. But, for the purpose of this inquiry, they must be separated so far as is possible, and the increased cost of local operation ascertained to such an extent as will enable the court to determine the issue involved. At best the additional cost of local operation can only be an estimate. But courts act upon the opinions of expert witnesses and base their judgments thereon, when it is the best testimony that can be adduced. In *Smyth* v. *Ames*, *supra*, Mr. Justice HARLAN, commenting upon the testimony of Mr. Dilworth, said:

"He *estimated* that the percentage of operating expenses on local business would exceed the percentage on all business by at least ten per cent. and that it might go as high as twenty per cent or higher. And this view is more than sustained by the evidence of witnesses possessing special knowledge of railroad transportation, and of the cost of doing local business as compared with what is called through business. Indeed, one of those witnesses states that the cost of carrying local freight is four times as much as the cost of through freight per ton per mile; another that the cost of the short haul is reasonably double that of the long haul. If due regard be had to the testimony—and we have no other basis for our judgment—we are not permitted to place the extra cost of local business at less than ten per cent. greater than the percentage of cost of all the business." (Opinion, p. 529.)

But the court below was not satisfied to follow the method unanimously approved by this court. In the opinion which was filed July 6, 1898, local operating expenses were entirely ignored, and in the figures so industriously made by the court not one pertains to operating expenses, either locally or as a system; that is to say, the opinion below assumes that it does not cost anything to operate a railroad. Two weeks after the opinion was filed, the decree was entered, in which the court below finds that it "is unable to find from the testimony what

the *actual* cost of earning the local earnings for the fiscal years ending June 30, 1894, 1895, 1896 and 1897 was." This, we respectfully submit, only serves to make more plain the utter disregard by the court of the law as laid down in *Smyth* v. *Ames*. Of what avail is it for the court to say that it is unable to find "the actual cost of earning the local earnings"? It has never been claimed by anyone that the *actual* cost of local operation can be known, but it is well understood that the increased cost of local operation can be fairly *estimated* by competent expert witnesses.

Mr. Dilworth's testimony, upon which this court largely based its opinion in *Smyth* v. *Ames*, was only an estimate. In this case, as in that, complainant tendered the testimony of witnesses, in the language of Mr. Justice Harlan, "possessing special knowledge of railroad transportation, and of the cost of doing local business as compared with what is called through business." Again we suggest that testimony which is proper to be considered and acted upon by the Supreme Court of the United States is proper and fit for the consideration of the Circuit Court of the United States for South Dakota. If this court can act upon the opinions and estimates of competent and trustworthy witnesses, that court ought not to require more.

What would have been the fate of *Smyth* v. *Ames* if the actual local operating expenses must be ascertained in dollars and cents? If the court must know "the actual cost of earning the local earnings" neither *Smyth* v. *Ames* nor any case questioning the authority of a State Board of Railway Commissioners could ever be maintained, for in no case can the *actual* local operating expenses be ascertained. This is a

sufficient answer to the demand of the court below for actual knowledge. Unless the authority of a state legislature or Board of Railway Commissioners is above and beyond restraint, courts must have power to decide, according to the circumstances, as they appear from the best evidence obtainable. And estimates and opinions of witnesses possessing "special knowledge" are taken every day in courts of justice, and are acted upon without hesitation when they constitute, as they often do, the best evidence that can be produced upon the subject.

Complainant in this case followed step by step the line of testimony approved and acted upon in *Smyth* v. *Ames*, and the record shows how thoroughly the witnesses understood the subject, and how clearly and convincingly they testified in respect to it.

1. A. J. Earling, vice president of the Chicago, Milwaukee and St. Paul Railway Company, who stated that he had been in railway service since 1866—a period of more than thirty years, testified as follows:

"Q. Mr. Earling, are you acquainted with the relative transportation expenses of local traffic and through traffic?

A. Yes, sir; I have given that subject a great deal of study for many years.

Q. Please state in your own language the relative cost of conducting local and through traffic and the reasons which make them differ if they do.

A. I have found that it costs at least twice or three times as much to do the local business as it does to do the through business. Twice or three times as much in proportion to the earnings to do the local business as to do the through business." (Rec., 236.)

Mr. Earling then went on to show in the clearest possible manner *why* the conduct of local business is much more expensive than through business in proportion to

the revenue derived. He pointed out the difference between hauling light trains (which must necessarily produce small revenue), as compared with heavy trains, loaded to the capacity of the engines employed in through service, and which bring in a revenue to the company, to the extent of their earning capacity, from the time they start until they reach their destination.

His testimony is a demonstration of the proposition that the expense of conducting local business is very much in excess of the expense of conducting through business.

(See his testimony, p. 236 to 243 of the record.)

2. W. H. Truesdale, vice-president and general manager of the Chicago, Rock Island and Pacific Railway Company, from whose testimony it appears that he is an experienced railway man, entirely familiar with the subject upon which he testified, spoke of it as follows:

"There can be no question but the expenses of doing local business is much greater than that of handling through business. Just how much it is is a question. It is hard to say with any degree of accuracy. The opinions of railway people differ on that subject. I should say that a very conservative estimate of the difference in the expenses of doing a local, what you may term a strictly local business, as compared with through business, is somewhere in the neighborhood from two to three times as much for the former as the latter. There are many items of expense that enter into the handling of local business that do not in the through business. The chief difference I may say is in the trains and car loads. A through train can be loaded to the full capacity of the engine. It usually is—

Q. At the beginning?

A. At the beginning and through for its entire run. The local train, on the other hand—it may start with a train full, but that is rarely the case, and by the time it gets through its run, have practically nothing on the train,

and *vice versa;* it may start with nothing and at the end of its run have a full train. But, as a general rule, the local trains run lighter over their entire run than the through trains. And, if you get on an average of from one-third to one-half of the engine's capacity in the train, you are doing very well. Of course, in transacting the local business, the expenses of switching and the risks incident thereto are very much greater than on the through trains. The handling of freight and the labor incident to it is much more than in the through business—that is, about the local intermediate stations, the item of only partly loading your cars, a very large part of your cars, less than car loads, in some, and cars only partly loaded; they start from the beginning of the run with what is called a local way car. It may be full at the beginning, and by the time you get over the run, it is only half full, and at the end of the run there may be only one hundred pounds in the car, yet you have to haul it as though it was a full loaded car." (P. 312 and 313 record.).

On pages 327 and 328 of the record he testified as follows:

"Q. If 60 per cent. was a fair percentage for the operating expenses of a railway system situated as the St. Paul is, what, in your judgment, would be about the percentage of operating expenses to earnings of the lines in South Dakota, considering the difference between local business and the business of the system as a whole?

A. The item of expense would be relatively greater in South Dakota, as I explained this morning. Briefly, the expenses of transportation, the business being largely local, as against a great percentage of the business of the lines of the St. Paul road, being through business, and figuring that the transportation expenses average generally somewhere between 30 and 33⅓ per cent. of the total expense, I think, that is not very wide of the mark. I should think the percentage of gross earnings in South Dakota would be somewhere in the neighborhood of 85 or 90 per cent."

3. C. H. Chappell, vice-presiden and general manager of the Chicago and Alton Railroad Company,

from whose testimony it appeared that he had been in the railroad business from 1857, and had been general manager of the Chicago and Alton road since 1883, testified as follows:

"Q. In your judgment, Mr. Chappell, if you were called upon to express an opinion as to the relative cost of transportation upon local traffic and through traffic, what would be your opinion?

A. As to relative cost?

Q. Yes, sir.

A. I think the local traffic costs three or four times as much as the through traffic.

Q. Please explain fully, and in your own language, your reasons for expressing that opinion.

A. The first and the principal reason is the fact that, in local trains, they ordinarily carry a very small tonnage; the local trains are necessarily run with very few cars. They have a great deal of work to do at the different stations, and the wear and tear is very great for that reason, and the train men on local trains all receive larger pay per mile than on through trains.

Q. Does the fact that a through train is an earning train from the point at which it starts to its destination, while a local train is composed at the start of fewer cars, and the load which it is carrying is varible from station to station, enter into your estimate?

A. Certainly, that is one of the principal considerations." (Rec., 336 and 337.)

Upon cross-examination, Mr. Chappell, testified:

"Q. Take it upon the general traffic of the system, the earnings are one dollar as against sixty cents expense, how much expense would be required to earn one dollar in local freight traffic?

A. I should say ninety cents, somewhere in that vicinity." (Rec., 342.)

4. J. T. Harahan, second vice-president of the Illinois Central Railroad Company, who has had many years experience in railway service, testified as follows:

"Q. Which is more expensive in proportion to the

earnings, local business or through business? A. Of course the local business is more expensive to handle than the through business.

Q. How much more expensive is local business in a western state like South Dakota than through business?

A. Well, we have only got fourteen miles in South Dakota, but we have other lines running up to them in Iowa that are similarly situated as this part of the line I speak of between Sioux Falls and Sioux City, and we figure, out in that country, that it costs from two to three times as much to do local business as it does to do the through business.

Q. In proportion to the earnings?

A. Yes, sir; in proportion to the earnings." (Rec., 588.)

Further testifying he said (see pp. 590, 591 and 592):

"Q. You spoke of the lines of your company running to Sioux Falls, South Dakota?

A. Yes, sir.

Q. From what point on your system does that line diverge?

A. From Cherokee, Iowa. It runs from Cherokee, Iowa, to Sioux Falls, South Dakota, about ninety-five miles in length.

Q. Can you state what ratio the operating expenses bear on that line to the earnings?

A. Yes, sir; I have some figures made on that. That is a local line, you know.

Q. Do the figures you have include local and interstate business, or only the local business?

A. It includes everything.

Q. It is the gross business?

A. Yes, sir; it is the gross business.

Q. Will you state, by years, the proportion of operating expenses to earnings?

A. Well, for five years commencing with 1893 it cost—the average cost, commencing with 1893, and ending with 1897, both inclusive—it cost us $116.40 to earn $100, varying in 1893, $107.77; 1894, $122; 1895, $108.90; 1896, $103.30; 1897, $136.10, making, as I stated, an average cost of $116.40 for five years, to get $100.

Q. In other words, Mr. Harahan, the operating expenses were 116.40 per cent.?

A. Yes, sir: this don't include interest. This amount only included operation and taxes.

Q. Of that line, what portion is in South Dakota?

A. 14.95 miles in South Dakota.

Q. The condition on that line is somewhat similar to our line in South Dakota, is it not, as to the character of the traffic and general business?

A. They are similar to the line which I know personally running between Soux Falls and Sioux City; and I would say, so far as the operating expenses are concerned, both ought to be about the same, everything else being equal."

Mr. Harahan also testified as to the expense of conducting through business, citing the Chicago and Freeport line as an example, and testified that the average cost for conducting the business on that line for the five years from 1893 to 1897, inclusive, was only 53.28 per cent. (Rec., 593.)

5. George B. Harris, vice-president of the Chicago, Burlington and Quincy Railroad Company, a railroad man of many years' experience, testified (Rec., 642) as follows:

"Q. Mr. Harris, is there a difference in the expense of conducting local traffic as compared with through traffic, in proportion to the earnings from each?

A. I should say there was a very large difference.

Q. Which is the more expensive business to conduct?

A. The local business is very much the more expensive.

Q. What ratio in expenses would you say that local and through business bear to each other?

A. I should say that a very conservative estimate of the earnings and expenses would be at least three to one; that is to say, that the local traffic in that relation is three times as expensive."

By all this testimony complainant demonstrated that

the cost of carrying on local operations is very much greater than the cost of conducting through business. Just how much more *is necessarily a matter of opinion and estimate.* In this case, as in *Smyth* v. *Ames*, the witnesses varied in their opinions as to the relative cost of through and local business, but in this case, as in that, no witness failed to testify most positively that the cost of local business was very much larger than the cost of through business. The operating expenses of a system include both local and through business, and, of course, operating expenses locally must exceed, the operating expenses of the entire system.

The lowest estimate of any witness is from 85 to 90 per cent. (See testimony of Mr. Truesdale, Rec., 327, 328.) Mr. Chappell places it at 90 per cent. (Rec., 342.) From Mr. Earling's testimony (Rec., 234) it fairly appears that in the conduct of the South Dakota business, interstate as well as local, it costs all, if not more, than the company received. He points out fully the reasons for his opinion, and concludes with the significant language:

"In other words, if you will permit me to say so, I would not be willing to maintain and operate these lines for that sum of money. I should not care to take the contract to do it." (Rec., 234.)

Eighty-five per cent is a very low estimate for the local operating expenses, considering the system operating expenses to be 60 per cent., but, as a matter of fact, they were more than 60 per cent. In the four years covered by the testimony they varied from 60.21 to 64.21 per cent. on the system. We have, therefore, been more than fair to the defendants. We have taken less than the minimum per cent. as the cost of

operating the system, and have taken the lowest figure given by any of the witnesses, as the increased cost of local operation.

As we have before pointed out, the operating expenses of the system are ascertained each year with mathematical accuracy; but the court below, with the figures before it showing exactly what the operating expenses of the *system* were, found that it was impossible to ascertain *actually* the local operating expenses in South Dakota, and therefore *threw out operating expenses entirely.* One would suppose that the court might at least have allowed the expenses that were actually proved, namely, the operating expenses of the entire system as such,—being in no year less than sixty per cent. If anything was ever made plain it was made plain in this case that local operating expenses were very much higher than the operating expenses of the system for reasons which appear in *Smyth* v. *Ames*, and much more convincingly in this case.

The learned judge had before him full and complete testimony showing first, the actual operating expenses of the system and, secondly, demonstrating the increased cost of local operation, and yet in the opinion, which is a part of this record, he does not allude to operating expenses at all, and in his elaborate computation on which his decree was based, he deals only with gross earnings. It would be hard to believe that so palpable an error could be committed, if it were not disclosed by the unequivocal language of the opinion and by the computations which are contained in it and entered in the decree.

The court will not fail to notice a peculiar feature in the decree, which was entered two weeks after the opinion was filed. After ignoring operating expenses entirely

and filing an opinion in which it was made perfectly certain that the court did not consider operating expenses as an element in the case, it inserts a finding in the decree:

"That the court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896 and 1897 was."

Of course it was impossible; and it always will be impossible for any court to ascertain the *actual* expense of local operation, but why insert such a finding in the decree, when the the court had filed an opinion which ignored operating expenses altogether and had constructed an elaborate table of percentages upon gross earnings alone?

"Conducting Transportation" as a Factor in Operating Expenses.

(c) The court had before it testimony fully explaining the relation which local operating expenses bear to the through operating expenses and the system operating expenses. Witnesses of intelligence and experience had explained fully why the one is greater than the other, and had made as their lowest estimate of local operating expenses 85 per cent. But aside from the positive declaration of witnesses an analysis of the testimony leads to the same conclusion. Operating expenses are made up of a great number of expenditures which must necessarily be made in carrying on the business of a railway corporation. They include maintenance of way, maintenance of equipment, taxes, general expenses and conducting transportation. The item "conducting transportation" is the only element of increased cost in local

operations of which we need now take notice. It is a technical term used by railway accountants and operators and includes avery large proportion of the operating expense, whether applied to local or through business. It consists of many items among which are wages of conductors, baggagemen, brakemen, engineers, firemen and wipers, fuel, oil and waste, train and station supplies, station service, personal injuries, damage to property, damage to freight, stock yards expenses, expenses of elevators, mileage of cars, sleeping car and parlor car expenses, trackage and switching charges, repairs of locomotives, repairs of cars tools and machinery, and other items which might be enumerated. (Testimony of Mr. Earling, Rec., 278.)

The item "conducting transportation" when applied to local opertations is largely increased, as is shown by the testimony we shall quote. The train and engine men receive somewhat higher pay; local trains are compelled to do switching en route; much more property is broken even under the most careful handling; there is more wear and tear on the equipment, on the rails, frogs, wheels and other portions of the property. The cars are injured more and the fuel bills are greater in local than in through traffic. In a word, every element going to make up cost of "conducting transportation" is increased in local business. All this was fully explained by the expert witnesses; and the court had only to read the testimony to fully understand the greater cost of local operation and the reasons why it is greater.

The Reason for the Increased Cost of Local Operation.

Complainant not only proved as a substantive fact that local business is conducted at an increased expense, but elaborately explained by competent witnesses the reasons upon which the fact rests. They pointed out in great detail the method of operating local trains and through trains. They showed wherein the one is more expensive than the other, and they made the whole subject so plain that it cannot be misunderstood. There is but one way of avoiding its effect, and that is by ignoring it altogether.

Mr. Earling testified:

"Q. The wages paid to engineers, firemen, conductors and brakemen are the same on a train which is loaded to its full capacity as upon a light train, is it not, practically? A. No, sir.

Q. In what respect do they differ? A. The wages paid to trainmen on through trains are somewhat less than are paid to the men who are on trains that do a local business.

Q. The time consumed in handling the business is another element entering into the expense, as a general thing, is it not? A. Yes, sir. It frequently occurs that a train which is required to do way work, switching, loading and unloading freight at the stations along its run is delayed so that it consumes more than ten and a half hours in making a run of 100 miles. In that case, overtime has to be paid, while in the case of a through train there is no occasion for such delay, for they have practically no work to do at stations, and they pass over the division and there is hardly any overtime because they do it easily in less than ten hours, but it often happens that what we call way trains are one or two hours more than the ten and a half hours making the 100 miles. The payment of the trainmen and enginemen is based on the miles that they make, or on a mileage basis.

Q. The amount of tonnage carried on any given

train is also an element to be considered in arriving at the cost of operation? A. It is the principal element.

Q. And what is the principal thing to be considered by a railway operator in conducting his traffic operations, in respect to the loading of his trains? A. The constant effort of all transportation men, and operating men, is to have full trains. By that I mean to have every locomotive loaded to its capacity, in going over the line, and to have as few light trains as possible. I would like to cite an instance in connection with our South Dakota line, just how it operates and why it costs so much more to do the business than it does on the lines where there is plenty of traffic, and enough freight to load the engines to their capacity. You are familiar, no doubt, with the branch line this company owns, extending from Andover, South Dakota, to Harlem, North Dakota, the same being a short distance in North Dakota, only a few miles. On that line at the present time we are operating a train three times a week, that is, it goes up and back the same day and does that three times a week. The traffic is so light that if that train was operated once in ten days it could do all the business of the line, but we have to run it three days in the week, and consequently the amount of freight and the number of passengers that we carry is very small; yet, the expense for wages, fuel and supplies are exactly the same. They are a great deal more than they should be, because we run three trains a week, instead of one in ten days. We could haul all the freight and carry all the passengers, if we ran the train once in ten days.

Q Have you any statistics showing the average number of tons of freight you carry on your South Dakota lines, or any of them? A. I have that information for a few of the divisions; I had it made up especially for this occasion. From Mitchell to Sioux City, a very small part of which line is in Iowa, only four or five miles, I think; the balance is in South Dakota. These statistics, which are carefully and correctly made, show that during the month of December, 1897, the average number of tons of freight per train for the month was ninety-six tons, while on the divisions where we have through business, I have taken the line from Chicago to

Milwaukee, the average there per train for the same month was 434 tons; on the line from Milwaukee to La Crosse it was 260 tons for the same month; and on the line from La Crosse to Minneapolis for the same month the average was 286 tons. Now, the line from Mitchell to Sioux City is rather better than the average of all the South Dakota lines in furnishing traffic. It is rather above the average. There are many South Dakota lines which would show a much smaller average than ninety-six tons.

Q. Well, have you the information as to any other divisions? A. No, I have not that information regarding other divisions.

Q. Not here, of course? A. No, sir.

Q. Have you got the division from Madison to Woonsocket? A. I think I have that. On the line between Madison and Woonsocket, which is all in South Dakota, the average per train for the month of December was seventy-two tons of freight.

Q. You have made up the figures on these divisions for the purpose of testifying here this morning? A. Yes, sir; we make up figures of this kind here and there in order to check the business of the various divisions, to see whether we have full trains or whether they are only partly filled, but I have not worked it up with reference to any other divisions except those I have named.

* * *

Q. Do the figures you have given by way of comparison on different divisions include all freight trains, whether technically classed as local or through trains? A. They include all freight trains that run over the divisions I have mentioned during the month of December.

Q. A through train is a train which is made up at a certain terminal and run right through to its destination without stopping for any intermediate business? A. Yes, sir; that is a through train.

Q. While a local train, whether it has some through business or not, is a train that stops either to take on or let off freight? A. That is correct.

Q. You have stated that it costs two or three times as much in proportion to the earnings derived from the

traffic to conduct local business than it does to conduct through business. Is that estimate fairly applicable to the business of the South Dakota line, as compared with the system as a system? A. It is a conservative statement, I should say. We have kept some statistics to show what it costs for the wages of engineers and firemen, the wages of conductors and brakemen, the cost of fuel, and the cost of supplies for locomotives and caboose cars; and those items only, nothing else entered into it, to haul 100 tons of freight one mile. These statistics show that on the line extending from Mitchell to Sioux City, it cost during the month of December, 1897, for those items which I have mentioned, 23.88 cents to haul 100 tons of freight one mile.

Q. That is simply for those particular things? A. For those particular items. While on the entire system during the same month the cost for those same items was 12 93 cents, nearly twice as much on the South Dakota line as it is on the system. I think I could further illustrate by assuming that I was engaged in the teaming business between two given points, and we will assume that the maximum load for a team and wagon was 3,000 pounds. Now, if I started out from one point with a few hundred pounds of goods and go along and pick up a few hundred pounds more, and so on, by the time I have reached my destination I then have a full load. I have hauled with that team the equivalent of one-half a load for the entire distance. Now, it has cost me just as much as if I had hauled a full load from the beginning to the end. Now if, as happens to be the case in South Dakota for nine months in the year, I only get goods enough so I have hauled but 25 per cent. of the 3,000 pounds, it is very plain that it increases the cost per hundred pounds or per pound as the load diminishes, or as it decreases below the maximum of 3,000 pounds. It is just exactly the same in the operation of trains, with the exception that it takes a little more fuel, and there is a little more wear and tear in hauling a full train than there would be to haul a lighter train, but that additional cost for the additional fuel and the additional wear and tear is so insignificant as compared to the difference in the earnings that it ought not to be taken into consideration.

Q. If a man with a team could haul 3,000 pounds at once, could have the whole 3,000 pounds loaded when he was ready to start, he could haul it in one trip, but suppose they got only 1,000 pounds to the team, he would have to make three trips? A. Yes, sir.

Q. That is similar to the situation where there is not freight sufficient to make a full train? A. Yes, sir; where you are compelled to run a train for the public. As I stated before, between Andover, South Dakota, and Harlem, a few miles in North Dakota, we run a train three times a week; while all the business could be done if you ran a train once in ten days." (Rec., 238, 239, 240, 241, 242 and 243.)

Mr. Truesdale testified as follows:

"Q. What, if any, difference is there between local and through trains as to the item of wages? A. Well, usually the men handling local freight trains are paid necessarily more than those running through trains; that is, for the same distance run.

Q. Is there any respect whatever in which the expenses of a through train exceed that of a local train except the item of fuel, and how much is that? How much more fuel does it take? A. It is a very small item." (Rec., 313.)

Mr. Chappell spoke upon the subject as follows:

"Q. Is there any respect in which the expenses of a through train are as great as the expenses of a local train, with respect to the item of fuel consumed, that you now think of, except in the item of fuel consumed? A. I think not.

Q. And how much difference is there in the amount of fuel consumed in a run of 100 miles by local train, considering the increased time it takes to run it and the stopping and switching, compared with the through trains which run through without stopping, except for water and coal; will one nearly balance the other? A. A local train can very easily burn more coal in a run of 100 miles than a through train.

Q Because of the switching and the times it stops, the coal in the locomotive burning all the time? A.

Yes; and switching is very hard on coal consumption; a great deal of that is done on local trains." (Rec., 337.)

Mr. Harahan testified as follows:

"Q. Mr. Harahan, I would like to have you give in detail a statement in respect to the expenses of conducting a through business and a local business. For instance, what, if any, difference is there in the wages paid to the trainmen? A. Local crews are paid more than through crews.

Q. Do you remember how much more? A. Well, it varies with the runs. Usually engineers getting say 4 cents on through freight runs would get about 4.5 cents on local runs.

Q. Per mile? A. Per mile run. The firemen we pay 50 per cent. of that amount. The conductors we pay $90 per month, and, in some instances, they will not average—when the work is heavy, they will not average eighty miles a day. We have three crews to run over that district. They go out one day, come back the next and lay over a day. So the cost is much greater on the local than on the through run. On the through runs we pay the conductors 3 cents and the brakemen 2 cents per mile, while the local men would probably average 4 cents for the conductor and about 2¼ or 2½ for the brakemen, per mile run.

Q. Take the expenses of switching? A. The expenses, of course, of switching at various stations where they have to stop to do work, set out cars or take on cars, of course is considerable, depending, of course, on how much they have to do.

Q. Well, is there any respect in which the expenses of through trains equal that of local trains? A. No, sir; not that I can imagine. Of course, if the local trains run over the road, and did not do any work at any point, then naturally, the expenses would be the same, but the practice is to stop and do work at the stations wherever it is to be done, which consumes time and coal and causes wear and tear.

Q. The expense of station service—how does that correspond? A. Well, of course, it is much greater for local business than through business, because it requires

a certain percentage of the time of the operator to receive orders for the trains. They have to see that the freight is properly loaded, billed, and take care of it." (Rec., 593, 4, 5.)

Mr. Harris, of the Chicago, Burlington and Quincy Railroad, testified:

"Q. You have stated that the expense of conducting local business is as much as three times as great as the expense of conducting through business in proportion to the earnings derived. Will you please state the reasons, or some of the reasons, for this opinion? A. Well, among the reasons for that, I should say, that in the first place, as a rule, all of the expert labor, the train and engine men, as a rule, receive higher pay in local than in through service. The local trains are compelled to start out almost invariably rather light so as to be able with reasonable promptness to do the switching and work at local stations. They are frequently compelled to take and move business along the line, and arrive at their destination with very small loads. The amount of switching upon a local train is such that much more property is broken up in the natural course of events even under the most careful handling. You will break up more or less property at stations. There is more wear and tear on the equipment, on the rails, and frogs, and wheels, and brasses: the cars are injured more in local traffic than in through service. The fuel bill, I think, as a rule is rather more on local runs than on the through runs, because it is necessary to throw the engine over when under pressure, and the changing of the engine, switching about, tears the fire to pieces and the fuel is destroyed or rather wasted in that way. We don't get the economical value of it in local service.

Q. Now in respect to casualties—personal injuries? A. My belief is that the casualties—injuries to persons are greater on local than on through trains. I should say there is no question about that. I think that the unavoidable injuries of that kind are greater in the movements about local stations, in proportion, than in the great terminal yard where we handle an enormous business.

Q. Then, in your opinion, the expense of handling and conducting local business is higher than that of conducting through business in practically every item of it, is it not? A. I believe that the necessary expense of conducting local business is greater in every item of expense than in a through business, and that it is possible to do only a portion of the business that is done by the through trains, and the revenue is therefore very much less. That is our experience." (Rec., 643, 644.)

Let us now apply this testimony, which bears upon its face convincing evidence of its trustworthiness, to the problem which the issues in the case required the court below to solve.

Mr. Truesdale (pages 327 and 328 of the record) testified that the tranportation expense, or "conducting transportation," was between 30 and 33 1-3 per cent. of the total operating expenses. Assuming that the total operating expense of the system is 60 per cent. of the earnings—we have shown it was more in the lowest year under consideration—30 per cent. of such 60 per cent. is the expense of "conducting transportation." 30 per cent. of 60 per cent. is 18 per cent. 18 per cent., therefore, of the system earnings was necessarily expended in the single item of "conducting transportation" during that year.

Now, it clearly appears that the increased cost of "conducting transportation" locally is at least two and a half times greater than the system expense of conducting transportation (Rec., 236, 312, 313, 336, 337, 588 and 642.) Two and one-half times 18 per cent. is 45 per cent. That is, on local business the expense of "conducting transportation" is 45 per cent. of the earnings. Assuming that the system operating expenses were only 60 per cent. of the earnings and that of this 60 per cent. 18 per cent.

was the cost of "conducting transportation," 42 per cent. remains to cover all the other operating expenses.

If the cost of conducting transportation on local business is two and one-half times as much as it is on the business of the system, it follows that the cost of "conducting transportation" on local business is 45 per cent., being two and one-half times 18 per cent. If it be assumed that the items of expense of local operation outside of "conducting transportation" are only as large as they are upon the system, although as a matter of fact they are considerably larger, we have 42 per cent. to cover them and 45 per cent. to cover "conducting transportation," making 87 per cent. as the total cost of local operation. It therefore appears that Mr. Truesdale's estimate of 85 per cent. is clearly a conservative one even for the lowest year of the four covered by the testimony. These computations are on the basis of 60 per cent. for the operating expenses of the system. The testimony shows they were not quite that low, and in 1894 they reached 64.21 per cent. Thirty per cent. of 64.21 per cent. is 19.26 per cent., which is the system expense of "conducting transportation" for that year. This increased two and a half times—the additional cost of conducting local transportation—is 48.15 per cent., which is the cost of conducting local transportation for that year. To this must be added 44.95 per cent., representing the remaining elements of the system operating expenses, and the result is 93.10 per cent. For the year 1894, therefore, it cost not less than $93.10 for every $100 earned from the local business. For the four years immediately preceding the filing of the bill the local operating expenses varied from 87.30 per cent to 93.10 per cent. of the earnings. Given by years they are as follows:

The year ending June 30, 1894, 93.10%
The year ending June 30, 1895, 90.40%
The year ending June 30, 1896, 87.30%
The year ending June 30, 1897, 88.36%

These percentages of local operating expenses to local gross earnings in South Dakota for the years named are not mere guesses; they were reached by the fairest and most conservative estimates of experienced witnesses, who give clear and convincing reasons for them. Undoubtedly they are lower than the actual outlays in conducting the local business.

The evidence shows that the business in South Dakota is exceptional. There are no through trains in that state except for brief periods, and then only from two points. This appears from the testimony of Mr. Earling, as follows:

"Q. Now, I will ask you to state, Mr. Earling, whether the freight trains conducting the business of this company in South Dakota are properly classed as local trains or through trains? A. They are all local trains. Occasionally, however, during the fall months, when there is some live stock moving from Chamberlain, which comes from across the river, and when grain is moving freely, we sometimes have a full train out of Eureka, and we have occasionally a full train of stock out of Chamberlain, but that happens only occasionally during the three fall months, say September, October and November.

Q. The freight trains in South Dakota, whether they are engaged in an exclusively local business, or are carrying what is known as interstate traffic, are all operated in the same manner that local trains are operated, and must be so for the reasons you have given? A. It must be so because there is not sufficient traffic to run through trains except in instances I have cited." (Rec., 241.)

Inasmuch as all the business in South Dakota, whether state or inter-state, is done upon local trains—except an

occasional through train mentioned in Mr. Earling's testimony (Rec., 241)—it follows that if we can ascertain by direct evidence any items of operating expense, we have, to that extent, ascertained the local operating expenses. Now, there are some items which, by careful examination of accounts, can be localized and fixed definitely upon a certain part of a system. This Mr. Earling did in a most careful and painstaking way, and the result showed that in reality the operating expenses in South Dakota were much larger than the estimates of any witness.

He testified (pages 219 to 308 of the record) concerning the cost of conducting business in South Dakota. The summary of his evidence appears in Exhibit 22, page 235 of the record, and the details thereof appear in Exhibit 23, page 300 of the record. This testimony is given from statements of the actual amounts expended, when actual amounts could be ascertained, and from experience and knowledge of the property and its requirements from year to year and from time to time. They do not include extraordinary expenses, such as the cost of removal of snow, or damages occasioned by heavy rains and in the repair of washouts. It was based upon thirty years' experience in the service of the complainant company. In every instance of doubt or uncertainty the defendants were given the benefit of it. Mr. Earling is corroborated in his testimony regarding each item of estimated expense by Mr. Truesdale (Rec., 308–333); Mr. Chappell (Rec., 333–349); Mr. Harrahan (Rec., 584–608), and Mr. Harris (Rec., 639–658), all of whom are connected with the leading railway systems of the west, and all familiar with the territory and the subject under consideration.

Concerning this exhibit Mr. Earling testified:

"Q. State whether this paper and the aggregate amount you have read fairly shows the cost of operation and maintenance of the lines in South Dakota for the period named (the year ending June 30, 1897)? A. Yes, sir, except in many instances I think it is rather below actual cost, for instance, personal injuries, the amount paid for personal injuries, damages to property and various other items are far below the average, and I regard it on the whole as a very conservative statement. In other words, if you will permit me to say so, I would not be willing to maintain and operate these lines for that sum of money. I should not care to take the contract to do it." (Rec., 234.)

We have thus shown by a large number of witnesses that local operating expenses are necessarily very much higher than through operating expenses or the operating expenses of any given system of railroad. We have shown that upon complainant's system they are not less than 85 per cent., and may be very much more. It requires but a simple mathematical operation to determine what would be left to complainant of its South Dakota earnings after paying the operating expenses, whatever percentage they may be.

As to the gross local earnings in South Dakota under existing rates, there is no dispute. They are, as we have already seen, as follows:

	Freight.	Passenger.
For the year ending June 30, 1894,	$137,459.88	$270,146.47
" " " " 1895,	121,442.00	209,200.85
" " " " 1896,	110,432.45	217,673.50
" " " " 1897,	102,280.23	208,716.19

(See Exhibit No. 8; Rec., 25.)

Adding together the freight and passenger earnings in the above table, we have as the gross earnings from both sources the following totals:

For the year ending June 30, 1894, $407,606.35
" " " 1895, 330,642.85
" " " 1896, 328,105.95
" " " 1897, 311,005.42

These are the gross local earnings to which the court below applied the commissioners' proposed schedule without any deduction for operating expenses. We will now show what they would have been if operating expenses had not been overlooked.

The court below said it could not find the actual cost of conducting the local business, but it is certain that the court could have found *that it cost as much as it did to do the business of the system as a whole.*

It it had done even that, the elaborate tables of gross earnings in South Dakota upon which its industrious computations were made, would have been radically different.

The table would have stood:

For the year ending	Gross local earnings.	Local operating expenses.	Local net earnings.
June 30, 1894	$407,606 35	64.21% or $261,724 04	$145,882 31
" " 1895.....	330,642 85	62.35% or $206,155 82	124,487 03
" " 1896..	328,105 95	60.21% or $197,552 59	130,553 36
" " 1897..	311,005 42	60.94% or $189,526 70	121,478 72

We have inserted this last table, in which the local operating expenses are assumed to be no more than the operating expenses of the system as a whole, to show at a glance the surprising disregard by the court below of the settled principles governing the case. We were not given credit by the court for even such operating ex-

penses as the proof showed had been incurred in conducting the business of the entire system. And yet the learned judge had before him the evidence, undisputed and overwhelming, that the local operating expenses were certainly as high as 85 per cent. and probably much more. There is no room under the testimony for questioning the conclusions of the experienced railroad men who testified on the subject. As we have before stated, the testimony is more complete and more convincing than in *Smyth* v. *Ames*, and the court below might well have heeded the language of Mr. Justice HARLAN who, in that case, declared that courts have no other basis for their judgments than the evidence before them.

Let us now see what the net earnings were for the four years as to which the testimony was taken, if, as is absolutely certain, the local operating expenses in South Dakota were not less than eighty-five per cent. of the gross earnings:

For the year ending	Gross local earnings.	Local operating expenses.	Local net earnings.
June 30, 1894	$407,606 35	85% or $346,465.40	$61,140 95
" " 1895.....	330,642 85	85% or $281,046.43	49,596 42
" " 1896..	328,105 95	85% or $278,890.07	49,215 88
" " 1897.....	311,005 42	85% or $264,354.62	46,650 80

The above table shows what the net earnings in South Dakota were for the four years in question, allowing 85 per cent. for local operating expenses; but as we have seen, the estimate of 85 per cent. for local operating expenses is based upon the ability of the company to operate the entire system for 60 per cent., which is

less than it has been able to do for any year of the four. Of course, if the operating expenses of the system were more than 60 per cent., the local expenses in South Dakota would be more than 85 per cent., even on the estimate of the most conservative witness. If the court will refer to the analysis of the different elements which make up operating expenses, as shown by the testimony of the different witnesses, it becomes plain they must have been much more than 85 per cent. All this is explained and illustrated in the testimony respecting the cost of "conducting transportation" as one of the largest elements of operating expenses. This testimony shows (see page 40 of this brief) that the local operating expenses in South Dakota instead of being 85 per cent., must have been, at least,

For the year ending June 30, 1894....93.10%
" " " " " " 1895....90.40%
" " " " " " 1896....87.30%
" " " " " " 1897....88.36%

These are undoubtedly the figures which most nearly approach the actual operating expenses in South Dakota. They show the following results for the years named, namely:

For the year ending	Gross local earnings.	Local operating expenses.	Local net earnings.
June 30, 1894.....	$407,606 35	93.10% or $ 379,481 52	$28,124 83
" " 1895.....	330,642 85	90.40% or $ 298,901 14	31,741 71
" " 1896.....	328,105 95	87.30% or $ 286,436 50	41,669 45
" " 1897.....	311,005 42	88.36% or $ 274,804 38	36,201 04

We have now reached a point in the discussion where the court can judge of the tangible results of operating complainant's South Dakota lines, prior to the action of the railway commissioners in promulgating their schedule of reduced rates. It seems hardly necessary to observe that the court below ought to have done what we have done in the above tables. Gross earnings are not profits; and railroad companies cannot use them in payment of fixed charges, dividends or for any other purpose, until operating expenses are paid and satisfied. How the court below could end its investigation with a consideration of gross earnings alone is as incomprehensible to us as it was to Judges Amidon and Thayer in the North Dakota case, *supra*.

Of course, gross earnings are to be considered; *but considered only as a step toward ascertaining net earnings*. A railroad company may have large gross earnings and still have little or nothing with which to pay fixed charges or any return to the owners upon their investment. That was the situation in the Reagan case. (*Reagan et al.* v. *Farmers' Loan & Trust Co.*, 154 U. S., 362).

How could the court below—how can any court—determine whether a railroad company is earning a just and reasonable reward for the service or upon its investment, until it has first learned how much money the company has succeeded in saving as a result of its operations? If a railroad could be operated without expense; if engineers and firemen and conductors and brakemen could be secured without the payment of wages; if equipment and fuel were free; and if the multitude of expenses attendant upon railway operations could be entirely eliminated so that the company could keep all that the public pays it

for services; if there were no fixed charges, and no expectation of reward on the part of the stockholders, the business would, indeed, be a pleasant one, and rates might be scaled down to zero without impairment of constitutional rights. The court below was unable to find "beyond a reasonable doubt" that reducing complainant's gross earnings would take its property without just compensation or without due process of law. But complainant's objection to the action of the railway commissioners is not that it would take from it some of its gross earnings, but that it would take all of its net earnings.

It does not seem to have occurred to the court below that a reduction of gross earnings amounting to any given per cent. necessarily works a much larger percentage of reduction in the net earnings, for reasons which are obvious, and which will presently be shown by actual figures.

We now proceed to consider the proposed reductions.

III.

PROPOSED SCHEDULE OF RATES.

The statute of South Dakota, under which the commissioners acted, authorized them to adopt a schedule of both freight and passenger rates, the former being left by the act to the untrammeled discretion of the board, and the latter fixed at not more than 3 cents per mile. On the 26th day of August, 1897, the commissioners promulgated their proposed schedule of rates, reducing the freight rates and

passenger fares that the complainant might lawfully receive. A great mass of testimony was taken relating to the extent of such reductions. It was established by the complainant, conceded by the defendants and found by the court, that the reduction in freight rates amounted to 17.44%
and in passenger fares..... 15.27%
That is, had the commissioners' proposed schedule of rates been effective during the four years prior to the filing of the bill, the complainant would have received $82.56 instead of $100 earned under existing freight rates, and $84.73. for every $100 now earned in its passenger business. The reduction in dollars under the proposed schedule of rates would be:

For the year

ending	Freight.	Passenger.	Total.
June 30, 1894....	$23,973.00	$41,251.37	$65,224.37
" " 1895....	21,179.48	31,944.97	53,124.45
" " 1896....	19,259.42	33,238.74	52,498.16
" " 1897....	17,839.25	31,870.96	49,710.21

Application of Proposed Reductions.

Knowing the reductions made by the Commissioners' schedule, both in percentage and in actual amounts, the next step is to apply them to the earnings as they stood under existing rates And here we suggest again that there is no dispute about the amounts and reductions, the proof being clear and the court having found them and entered them in its decree.

By tables to which we now ask the attention of the court, it will be seen at a glance what reduction of net earnings is made, whether the local operating expenses

are assumed to be the same as that of the entire system, or whether they are considered to be 85 per cent., or whether they are considered to be a still larger percentage, as undoubtedly the fact is. The net earnings must always be what is left of the gross earnings after operating expenses are deducted.

TABLE NO. 1.

If operating expenses are no greater locally than upon system—

	Year Ending June 30, 1894.	Year Ending June 30, 1895.	Year Ending June 30, 1896.	Year Ending June 30, 1897.
Gross local earnings—				
Freight	$137,459 88	$121,442 00	$110,432 45	$102,289 23
Passenger	270,146 47	209,200 85	217,673 50	208,716 19
Total	$407,606 35	$330,642 85	$328,105 95	$311,005 42
Local operating expenses, basis of entire system.	64.21% or $261,724 04	62.35% or $206,155 82	60.21% or $197,552 59	60.94% or $189,526 70
Net local earnings	$145,882 31	$124,487 03	$130,553 36	$121,478 72
Less reductions—				
Freight, 17.44%	$23,973 00	$21,179 48	$19,259 42	$17,839 25
Passenger, 15.27%	41,251 37	31,944 97	33,238 74	31,870 96
Total reductions	$65,224 37	$53,124 45	$52,498 16	$49,710 21
Net local earnings after reductions	$80,657 94	$71,362 58	$78,055 20	$71,768 70

TABLE No. 2.

If local operating expenses are eighty-five per cent. of earnings—

	Year ending June 30, 1894.	Year ending June 30, 1895.	Year ending June 30, 1896.	Year ending June 30, 1897.
Gross local earnings—				
Freight	$137,459 88	$121,442 00	$110,432 45	$102,589 23
Passenger	270,146 47	209,200 85	217,673 50	208,716 19
Total	$407,606 35	$330,642 85	$328,105 95	$311,005 42
Operating expenses	85% or $346,465 40	85% or $281,046 43	85% or $278,890 07	85% or $264,354 62
Net local earnings	$61,140 95	$49,596 42	$49,215 88	$46,650 80
Less reductions—				
Freight, 17.44%	$23,973 00	$21,170 48	$19,259 42	$17,839 25
Passenger, 15.27%	41,251 37	31,944 97	33,238 74	31,870 96
Total reductions	$65,224 37	$53,124 45	$52,498 16	$49,710 21
Loss	$4,083 42	$3,528 03	$3,282 28	$3,059 41

TABLE NO. 3.

If the local operating expenses are 93.10 per cent., 90.40 per cent., 87.30 per cent. and 88.36 per cent. of the earnings for the years 1894, 1895, 1896 and 1897, respectively:

	Year ending June 30, 1894.	Year ending June 30, 1895.	Year ending June 30, 1896.	Year ending June 30, 1897.
Gross local earnings—				
Freight	$137,459 88	$121,442 00	$110,432 45	$102,289 23
Passenger	270,146 47	209,200 85	217,673 50	208,716 19
Total	$407,606 35	$330,642 85	$328,105 95	$311,005 42
Operating expenses	93.10% or $379,481.52	90.40% or $298,901 14	87.30% or $286,436 50	88.36% or $274,804 38
Net local earnings	$28,124 83	$31,741 71	$41,669 45	$36,201 04
Less reductions—				
Freight 17.44%	$23,973 00	$21,179 48	$19,259 42	$17,839 25
Passenger 15.27%	41,251 37	31,944 97	33,238 74	31,870 96
Total reductions	$65,224 37	$53,124 45	$52,498 16	$49,710 21
Loss	$37,099 54	$21,382 74	$10,828 71	$13,509 17

If the actual expenses of operation in South Dakota for the four years ending June 30, 1897, were the sums appearing in Exhibit 31 (page 566 of record), it is evident by mathematical calculation that the local operating expenses for the year ending June 30, 1894, instead of being only 85 per cent., were 96.89 per cent.; for the year ending June 30, 1895, they reached the enormous expenditure, for operating expenses, of 143.06 per cent.; for the year ending June 30, 1896, 114.59 per cent., and for the year ending June 30, 1897, 111.14 per cent. That is, for the year ending June 30, 1894, 1895, 1896 and 1897, respectively, for every $100 of the amount actually received, the complainant expended in the cost of operation, the sums of,

$96.89 in 1894.
143.06 in 1895.
114.59 in 1896.
111.14 in 1897.

Taking these four years together, it cost the complainant in operating expenses in South Dakota an average of $114.17 for every $100 received.

Compare this testimony with that of Mr. Harahan (page 591), and it will be seen that it is in entire accord with the actual results of operating lines similarly situated, by other companies. He states that the average cost for five years, commencing with 1893, of that portion of the line of the Illinois Central Railway Company from Cherokee, Iowa, to Sioux Falls, South Dakota, including both state and interstate business, was $116.40 for every $100 earned.

The Effect Upon Net Earnings of a Reduction of Gross Earnings.

The court below dealt only with gross earnings. Neither operating expenses nor net earnings found any place in the computations by which it reached its conclusion. The learned judge found that the commissioners' proposed schedule would reduce complainant's gross freight earnings in South Dakota..... 17.44 per cent. and its gross passenger earnings..... 15.27 per cent. and in his view of the case complainant could not justly object to such a reduction. It is plain from the opinion and from the figures it contains that the court did not appreciate nor for a moment consider the fact that any percentage of reduction in gross earnings *operates as a much larger percentage of reduction in net earnings.*

Under table No. 1 the net earnings on both passengers and freight for the year ending June 30, 1894, were..... $145,882.31
Total reduction 65,224.37
which is 44.71 per cent. of the net earnings. This means that, even allowing that the cost of local operations is no greater than the cost of operations upon the entire system, the proposed reductions would have taken from complainant for the year ending June 30, 1894, 44.71 per cent. of its net earnings, or nearly one-half; and for each of the subsequent years 1895, 1896 and 1897 a corresponding percentage, varying as the operating expenses vary.

If, however, allowance be made for the increased cost of local operation, instead of assuming that it cost no more to operate locally in South Dakota than it

does to operate the entire system, the figures become still more striking. The subjoined table (No. 4) shows exactly what percentage of reduction is made in the net earnings by the commissioners' schedule, taking local operating expenses to be the different percentages given in the table:

TABLE NO. 4.

If operating expenses are of earnings—

	60%	65%	70%	80%	85%	90%
A reduction of freight earnings of 17.44% would reduce net earnings.....	43.60%	49.83%	58.13%	87.20%	116.27%	174.40%
A reduction of passenger earnings of 15.27% would reduce net earnings.....	38.17%	43.63%	50.90%	76.35%	101.80%	152.70%

This last table most strikingly exhibits the impropriety of generalizing on gross earnings when the effect upon net earnings is the question to be solved.

Nothing can be more certain under the testimony than that 85 per cent. is a low estimate of local operating expenses in South Dakota. And yet, table No. 4 shows that with local operating expenses at 85 per cent. of the gross earnings, the net earnings would be reduced by the commissioners' schedule—

On freight..... 116.27%

" passengers..... 101.80%

which simply means that the effect of the commissioners' rates would be to compel complainant to do business at a heavy actual loss. If complainant be required by the commissioners' schedule to do business at an actual loss, the value of the property used is only material for the purpose of determining how great an injustice is accomplished by the schedule.

IV.

THE VALUE OF COMPLAINANT'S PROPERTY IN SOUTH DAKOTA, AND THE REWARD WHICH ITS OWNERS SHOULD BE PERMITTED TO EARN.

In *Smyth* v. *Ames*, Mr. Justice HARLAN speaking for this court, said:

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case."

In the state of South Dakota the complainant has 1,101.06 miles of main track (Rec., 7), and it acquired this property between the years of 1879 and 1887. About 200 miles of it was acquired by purchase, namely, the line from Sioux City to Yankton, from Elk Point to and through Sioux Falls to Egan, and east of Egan to the Minnesota state line. The remaining 900 miles were constructed by the company and within the period named.

The total original cost of constructing and equipping the properties of the company in South Dakota was the sum of $19,476.540.23, or $17,688.90 per mile. This appears from the testimony of Mr. Whittemore, chief engineer

of the company (Rec., 393 to 431); Mr. Collins, general superintendent at the time his testimony was taken, but now general manager (Rec., 431 to 453); Mr. Bates, superintendent of bridges and buildings (Rec., 453 to 525), Mr. Manchester, assistant general superintendent of motive power (Rec., 526 to 537), and Mr. Winne, general auditor (Rec., 556, and Exhibit 28, page 563).

In respect to the testimony of these witnesses, it need only be stated that they are all gentlemen of age and experience, and against whom not the slightest imputation of bias or prejudice can be made.

Exhibit 25 (Rec., 423) gives the original cost of complainant's properties in South Dakota, except the cost of equipment and the shop estimate, and was testified to by Mr. Whittemore, the chief engineer. Mr. Collins, the then general superintendent of the company, testified fully respecting the equipment required and used in the conduct of the business of complainant in South Dakota. (Rec., 434 and 435). Mr. Winne gave the cost of such equipment (Rec., 556), and it appears in detail at page 563. Mr. Bates, in his evidence, gave the original cost of construction of the buildings, and Mr. Manchester testified concerning the cost of shop facilities and the proportion thereof required in the operation of the South Dakota lines.

That a railroad (whether employed in state or interstate business) requires all these things, need not be argued. Everyone knows that it does, and that, without them, the business cannot be carried on.

Referring, for instance, to the testimony of Mr. Manchester. It is plain that local lines of railway in South Dakota must have shop facilities for the repair of

engines and rolling stock. If they are not, or cannot be, located in South Dakota, they must be located elsewhere, the important point being that the local lines of South Dakota receive the benefit of such facilities. It is not therefore to be disputed that the South Dakota lines should bear their fair and just proportion of the value of shops and other facilities, wherever located, which are used for their benefit in connection with the other parts of the system.

The original cost of construction and equipment, as we have already shown, was $19,476,540.23. The amount expended for permanent improvements is $756,294. (Rec., 424.

The amount of bonds on South Dakota lines exclusively, is evidenced by Exhibit 4, page 11 of the record, to wit: $19,365,247.16, or $17,587.82 per mile, being less than the original cost of construction. The interest which these bonds actually bear amounts to an average of 5.69 per cent. The total amount of interest which must be paid by the company on account of South Dakota lines amounts per annum to $1,101,749.93. This indebtedness attaches to them, and if it be a fair indebtedness—and there is no evidence whatever to the contrary—these lines should bear it and are entitled to establish such local rates as will earn the proportion of the interest which is properly chargeable to the local business.

The market value of the bonds and stock of the company appears in the testimony of Mr. Mayer (Rec., 623 to 638). The present, as compared with the original cost of construction, appears from the testimony of Mr. Whittemore, chief engineer (Rec., 425 and 426), namely, that the property in South Dakota—the property to which the commissioners' proposed schedule of rates applies—could

not now be reproduced or replaced for less than the amount originally invested in producing it.

In truth, a railroad cannot be reproduced. It is the growth of years. Every month and almost every day new and added improvements are made; new and additional investments are placed upon it. The result is a property of greatly added value and efficiency, not to be measured by the original cost, but to be considered as a product of all that has been expended and all that has been done to make it what it is.

With all this testimony before it the court below found the value of complainant's property in South Dnkota to be $10,000,000, about half the amount shown to have been invested in it. There was no testimony disputing the valuation of complainant's witnesses, except in a few items and comparatively insignificant amounts. Mr. Whitney, one of defendants' witnesses, criticised the testimony of Mr. Whittemore relative to the original cost of construction, in four particulars, namely: (1) cost of laying and surfacing tracks; (2) number of ties per mile and cost per tie; (3) freight on material used in construction; (4) interest on amount invested during period of construction. (Rec., 870.)

Mr. Whittemore testified (Rec., 402) that it cost $450 per mile to lay and surface the track; Mr. Whitney estimated such cost at $240 per mile. Mr. Whittemore testified that in each mile of track 3,000 ties were laid; Mr. Whitney estimated that 2,816 ties were used (Rec., 840), a difference of 184 ties per mile. He made his estimate by counting the ties at stations while the train upon which he was a passenger was stopping to discharge and receive passengers. (Rec., 867.) He further esti-

mated the cost of such ties at 9 cents per tie less than the evidence of Mr. Whittemore showed they in fact cost complainant. (Rec., 869, 870.) The witness further gave his opinion of the proper amount to be charged by complainant for carrying materials used in the construction of the line, and criticised the testimony of Mr. Whittemore that three-fourths of a cent per ton per mile was a proper charge, and insisted that it should be six-tenths of a cent per ton per mile, or a difference only of $240 per mile on the entire South Dakota lines. (Rec., 841.)

Mr. Whittemore testified (Rec., 424) that one year's interest should be charged upon the amount used to construct the road; Mr. Whitney considered that interest for six months was ample to cover that item in the cost of struction. (Rec., 842.)

Other witnesses criticised certain testimony given by witnesses on the part of complainant, but the amounts affected by such evidence are insignificant and the items comparatively immaterial.

If we should concede that the testimony of all the witnesses produced by defendant upon the subject of valuation of complainant's property in South Dakota be taken as true, the original cost of construction would be reduced not more than $900 per mile.

The value of a railroad property which is to be the basis of calculation as to the reasonableness of rates can only be determined by considering all the elements enumerated by Mr. Justice HARLAN in his opinion in *Smyth* v. *Ames*. It is not to be guessed at, but reached by giving to each of these elements, as Mr. Justice Harlan said, "such weight as may be just and right in each

case." The court below, after quoting from the opinion in *Smyth* v. *Ames*, proceeds to overrule it in the following extraordinary language:

"It is true that the record shows that the property is bonded and mortgaged for an amount largely in excess of this sum ($10,000,000), but the amount of a mortgage upon property is no evidence of its value, and, therefore, *is not worthy of consideration.*"

Mr. Justice Harlan, speaking for this court only a few months before, had said that it was worthy of consideration. The court below had even quoted Mr. Justice Harlan's language. The learned judge might with equal propriety have said that the original cost of construction is not worthy of consideration, or that the amount expended in permanent improvements, the probable earning capacity of the property under the rates prescribed, and the sum required to meet operating expenses were not worthy of consideration. Which of these various elements enumerated by Mr. Justice Harlan were considered by the court below is not disclosed, but it is certain the bonded indebtedness was not, for he repudiates it in explicit language.

No one would claim that the amount of bonded indebtedness upon railroad property can *alone* determine its value; for if it could a railroad company might increase the value of its property at pleasure by simply issuing bonds against it. But bonds which have been issued in good faith for value, and which are in the hands of *bona fide* holders and upon which interest must be paid in order to protect the property from seizure and sale, are to be considered and to be given such weight as may be just and right.

Exhibit 4, on page 11 of the record, discloses the list of

mortgages upon the South Dakota lines. It appears therefrom that bonds were issued upon such lines to the amount of $19,365,247.16, bearing different rates of interest, the average of which is 5.69 per cent. They are held by *bona fide* purchasers for value; the proceeds of them went into the property, and the mortgages by which they are secured are valid and subsisting liens upon it. It is the fixed and settled doctrine of this court that a railway company may lawfully charge such rates as will enable it to pay interest upon a valid and lawful indebtedness, provided it be not for a greater amount than the fair value of the property.

Reagan v. *Farmers' Loan & Trust Company*, 154 U. S., 362, was a suit brought by the trustee of a second mortgage to enjoin the enforcement of rates established by the Railroad Commission of the State of Texas. It was brought upon the specific ground that the rates established by the commission would prevent the International and Great Northern Railroad Company from earning sufficient moneys to enable it to pay the interest on its subsisting mortgages. The mortgage indebtedness, instead of being thought "not worthy of consideration," was the very foundation of the suit. It was decided that the bondholders had a right to their interest, and that the company had a right to establish such rates as would earn the money with which to pay it.

If the court below had been more moderate in its statement of the law, it would have said that the amount of bonded indebtedness upon a railroad is not *conclusive* evidence of its value, or that it could not alone be taken as a basis for estimating value. That is what Mr. Justice Harlan had declared in deciding *Smyth* v. *Ames*, *supra*, in the following language:

"And the apparent value of the property and franchises used by the corporation as represented by its stock, bonds and obligations, *is not alone to be considered* when determining the rates that may be reasonably charged."

Brushing aside the mortgage indebtedness because it was "not worthy of consideration," was simply disregarding the plain language of this court, which the court below was bound to take for its guidance.

The court below had before it not only the opinion of Mr. Justice Harlan in *Smyth* v. *Ames*, *supra*, but the opinion of Mr. Justice Brewer at the Circuit in the same case, *Ames* v. *Union Pacific Railroad Co.*, 64 Fed. Rep., 165. Instead of holding that the bonded indebtedness was not worthy of consideration, Mr. Justice Brewer said:

"It is not easy to always determine the value of railroad property, and if there is no other testimony in respect thereto, then the amount of stock and bonds outstanding, or the construction account, it may be fairly assumed that one or the other of these represents it, and computation as to the compensatory quality of rates *may be based upon such amounts.* In the cases before us, however, there is abundant testimony that the cost of reproducing these roads is less than the amount of the stock and bond account, or the cost of construction, and that the present value of the property is not accurately represented by either the stock and bonds or the original construction account. Nevertheless, the amount of money that has gone into the railroad property—the actual investment, as expressed, theoretically, at least, by the amount of stock and bonds —*is not to be ignored, even though such sum is far in excess of the present value.*" (p. 177.)

The above quoted language of Mr. Justice Brewer in the *Ames* case at the Circuit, exactly accords with what Mr. Justic Harlan said, in delivering the opinion of this

court, in the same case. Both of the learned justices recognized what the court below did not—that the value of railroad property cannot easily be determined, and that no intelligent witness can be expected to fix the present value of the property without considering the various elements which necessarily enter into it.

But notwithstanding the difficulty experienced by the court below in finding the value of the property in South Dakota from the evidence, it did find a value and entered it in its decree, namely, $10,000,000. The learned judge said it was a guess; but as will presently appear the guess must be made much lower in order to justify the conclusion which was reached

The court, by its decree, scales down the valuation of the property in South Dakota to $10,000,000, and *ipso facto* scales down the bonded indebtedness to that sum. If the value of the property is $10,000,000 and the valid outstanding bonded indebtedness is much more, it is certainly good to the extent of the $10,000,000. When we come to submit to the court the computations of the court below, as to the gross earnings and the relation they bear to the value of the property as found in the decree, and to the rates that may reasonably be charged, it will be seen that the bonded indebtedness is ignored altogether in the figures as well as in the opinion, and the interest charges thereon not taken into account at all. In other words, the court not only eliminates operating expenses from the case, but disposes of fixed charges in the same summary manner.

We take it to be settled beyond controversy that a railroad company is entitled to such rates as will enable it to earn (1) operating expenses, (2) the interest on its fair and valid bonded indebtedness, and (3) some reward for its stockholders.

After fixing the entire value of complainant's property in South Dakota at $10,000,000, the court held, and properly, that rates upon traffic wholly within the state could not be based upon the entire valuation of the property within the state because the property is used not only for local business but for inter-state business. The learned judge stated that no court had as yet promulgated any rule, how a just and true valuation should be reached, upon which to figure local earnings. The court then said:

"In the absence of any such rule, this court believes it is fair and just to first ascertain what per cent. of the total gross earnings in any one year the total local earnings are for that year, and having ascertained that per cent. to take the same per cent. of the total value of the property as a fair value upon which to fix local earnings."

We have no fault to find with this rule, although it was not a new one, for Mr. Justice BREWER had suggested it in *Ames* v. *Union Pacific R. R. Co.*, *supra*.

Let us now examine the computations made by the learned judge.

For convenience we tabulate the figures upon the business for the four years prior to the filing of the bill, as they appear in the opinion and in the decree. This table shows at a glance the gross results of operation during those years. It deals entirely with gross earnings and shows that upon the assumed valuation for local purposes, the local gross earnings were:

For the year ending June 30, 1894.....18.5%
" " " " " " 1895.....12.7%
" " " " " " 1896.....15.6%
" " " " " " 1897.....16.3%

Table showing computations of court below as to gross earnings and valuation of property before reductions are made.

	Year Ending June 30, 1894.	Year Ending June 30, 1895.	Year Ending June 30, 1896.	Year Ending June 30, 1897.
Complainant's gross earnings from all sources in South Dakota.....	$1,840,651.79	$1,236,680.78	$1,557,100.00	$1,605,210.66
Gross local earnings from freight and passengers..	407,606.35	330,642.85	328,105.95	311,005.42
Percentage of gross local freight and passenger earnings to gross earnings from all sources (in round numbers).	22%	26%	21%	19%
Valuation of property in South Dakota.	10,000,000,00	10,000,000.00	10,000,000.00	10,000,000.00
Valuation of property in South Dakota—basis of above per cent.—for local purposes.....	2,200,000.00	2,600,000,00	2,100,000.00	1,900,000.00
Percentage of gross local freight and passenger earnings, to valuation for local purposes in South Dakota....	18.5%	12.7%	15.6%	16.3%

After reaching the results which we have embodied in the last table, the court below applies the reductions made by the Board of Commissioners to the gross earnings Take, for example, the year ending June 30, 1894. For that year the gross local freight earnings were $137,459.88,
which being reduced 17 per cent. would leave $114,091.70
The gross local passenger earnings were
$270,146.07,
which being reduced 15 per cent. would leave $229,624.50

Total gross local freight and passenger earnings for 1894 after reductions..... $343.716.20

This reduction on the local business would, of course, also reduce the gross earnings from all sources for that year in an equal amount, or from $1,840,651.79 to $1,776,761.64. The local gross earnings as reduced amount to 19 per cent. of the gross earnings from all sources as reduced. The court then says:

"19 per cent. of $10,000,000 would be $1,900,000, and the local earnings as reduced would be 18 per cent. *of that amount.*" (See opinion, Rec., 979.)

Before applying the reductions made by the commissioners the court had found that in 1894 complainant earned on its capital invested in local business 18.5 per cent. After the reduction the court concludes that complainant can still earn 18 per cent. on the local valuation, *a difference of only one-half of one per cent.* Complainant has, therefore, suffered hardly an appreciable loss. The explanation of this astounding result is obvious. *The court figures the earnings before reduction on one amount of valuotion for local purposes, and after reduction upon another amount.* Before the reduction, when the local

earnings were 22 per cent. of the entire earnings in the state, the local capital was assumed to be $2,200,000, but when by operation of the commissioners' reduction the local earnings were reduced to 19 per cent., the court promptly reduced the amount of local capital to 19 per cent. of the entire value of the property, or $1,900,000. In other words, when the local earnings are reduced by the commissioners' schedule, the local capital is also reduced, so that complainant continues to earn practically the same percentage on its investment.

The court says substantially: "It is true, your earnings have been reduced, but your investment has also been reduced, so you are not materially harmed." According to the opinion, complainant had $2,200,000 invested in the property for local purposes in 1894. But the commissioners' schedule, if it had gone into effect then, reducing freight earnings 17 per cent. and passenger earnings 15 per cent., would have left to complainant about the same percentage of earnings that it had before the reduction, because the same act which reduced its earnings also reduced its investment. This means that complainant was compensated for its loss of earnings by a loss of capital.

The best way to show the fallacy of an argument is often to press it to its logical conclusion. The course of reasoning pursued by the court below leads to this result: That local rates may be reduced to the extent of diminishing the local gross earnings in any amount even to 99 per cent. and still show substantially the same percentage of gross earnings to the assumed value of the property. The subjoined table shows the result of reductions from 5 per cent. to 99 per cent. if the theory of the court below is correct.

THE METHOD OF COMPUTATION ADOPTED BY THE COURT BELOW, CARRIED OUT IN DETAIL, FOR THE YEAR 1894.

By exactly the same method adopted by the court below, a reduction in the gross local freight and passenger earnings in South Dakota—	Would reduce the gross local freight and passenger earnings from $407,606.35 to—	And would reduce the gross earnings from all sources in the State from $1,840,651.79 to—	The percentage of gross local freight and passenger earnings to the entire gross earnings would then be —	The investment properly applicable to local business would then be reduced from $2,200,000 to—	Upon which duced valuation reduced local earnings w amount to—
Of 5% or $ 20,380 32	$387,226 03	$1,820,271 47	21.3%	$2,130,000 00	18.18%
10% " 40,760 64	366,845 71	1,799,891 15	20.4%	2,040,000 00	18.00%
15% " 61,140 98	346,465 40	1,779,510 84	19.5%	1,950,000 00	17.77%
16% " 65,224 37	342,381 95	1,775,427 42	19.3%	1,930,000 00	17.74%
20% " 81,521 27	326,085 08	1,759,130 52	18.5%	1,850,000 00	17.62%
30% " 122,281 90	285,324 45	1,718,369 89	16.5%	1,650,000 00	17.23%
40% " 163,042 54	244,563 81	1,677,609 25	14.5%	1,450,000 00	16.86%
50% " 203,803 17	203,803 18	1,636,848 62	12.5%	1,250,000 00	16.34%
60% " 244,563 81	163,042 54	1,596,087 98	10.2%	1,020,000 00	16.00%
70% " 285,324 44	122,281 91	1,555,327 35	7.8%	780,000 00	15.67%
80% " 326,085 08	81,521 27	1,514,566 71	5.3%	530,000 00	15.30%
85% " 346,465 40	61,140 95	1,494,186 39	4.1%	410,000 00	15.00%
90% " 366,845 71	40,760 64	1,473,806 08	2.7%	270,000 00	14.70%
95% " 387,226 03	20,380 32	1,453,425 76	1.4%	140,000 00	14.55%
99% " 403,530 29	4,076 06	1,437,121 50	.28%	28,000 00	14.55%

This is a startling table; for it shows that under the theory followed in the decision below a reduction in the gross local earnings from 5 per cent. down to 99 per cent. makes a variance in the percentage of reduced earnings upon the assumed local investment, from 18.18 per cent. to 14.55 per cent., *or only 3.63 per cent.* The mathematics of the court is such, that if the commissioners had reduced the rates 100 per cent. so as to entirely wipe out the local earnings, no harm would have been done, because the local investment would also have been wiped out,—and we could not complain that we had earned nothing upon an investment of nothing.

The radical error in the computation of the court below (aside from the fatal one of leaving out operating expenses) is that the valuation for local purposes is changed while the computation is being made. The problem was to determine what change the reductions would make in the earning power of complainant, as it existed prior to the reduction. Whatever portion of complainant's investment may have been assigned to the conduct of local business, the effect of a reduction must be calculated upon *that* investment, and not upon another one which has resulted from the very reduction that is being examined. The court had found that complainant's investment properly applicable to local business for the year 1894 was $2,200,000; but when it came to determining the effect of the reduction, it figured that the valuation was $300,000 less, because by the very reduction which was under examination the local investment was to that extent reduced.

The table to which we have just asked the attention of the court is based upon the operations for the year ending June 30, 1894. If applied to the years 1895, 1896,

1897, or any other year, the result would be the same, the reduced valuation simply varying as the original valuation for the different years varied. The court below made its computations for each of the four years in question, and found that under the reduced rates complainant would have earned on the value of the property thus apportioned to local business,

18.0% for the year ending June 30, 1894,
12.1% " " " " 1895,
15.3% " " " " 1896,
16.2% " " " " 1897.

The court after giving the above percentages as the result of its careful computations, concludes its opinion as follows:

"It certainly would be impossible for this court to find, beyond a reasonable doubt, that these per cents allowed to be earned by the railroad company for local earnings would be depriving it of its property without due process of law, or depriving it of the equal protection of the laws."

It is hard to understand how any court, with *Smyth* v. *Ames* before it, could have been content to rest its decree upon a method of computation which from beginning to end treats gross earnings as net profits. In the first place the percentages themselves are wrong, for, as we have shown, they are based upon a wrong valuation; but even if they were correct, they do not speak the truth, because gross earnings do not and can not show the effect of any given rate.

The court concluded its computations just when it had reached the vital question, namely, what amount of these gross earnings, with which the court was dealing, *must be expended in the conduct of the business?* Over

and over again, in *Smyth* v. *Ames*, this court had emphasized this obvious requirement. The learned speaks of the percentages of gross earnings as "these per cents allowed to be earned by the railroad company for local earnings." Can it be necessary to point out that the amounts which a railroad company is "allowed" to earn under any schedule of rates, is the amount it has left after paying its operating expenses? If the court had not halted at the very threshold of the proper judicial inquiry, it would have found that under the schedule promulgated, complainant would not have been "allowed" to earn anything in the shape of reward. Reward is profit; but neither in the railroad business nor in any other is it the entire moneys which are received.

We have shown what it actually cost complainant to operate its system for the four years preceding the filing of the bill, which are the years used by the court below in making its computations. The operating expenses of the system were,

For the year ending June 30, 1894..... 64.21%
" " " " " " 1895.....62.35%
" " " " " " 1896.....60.21%
" " " " " " 1897.....60.94%

of the gross earnings. These figures and their effect upon gross earnings were before the court. It was also shown by an abundance of testimony, which was not disputed nor attempted to be disputed, that local operating expenses are and necessarily must be much higher than the operating expenses of the system. It was shown that the local operating expenses in South Dakota could not have been less than 85 per cent. of the gross earnings, and that they were undoubtedly much more. These estimates were not based upon naked expressions of

opinion, but were reached by a careful, methodical and intelligent analysis made by men of large experience and special knowledge of the subject.

If the court will now turn to table No. 1 on page 50 of this brief, it will be seen that the net local earnings after the reductions made by the commissioners' schedule, and allowing no more for operating expenses on local business than were incurred upon the entire system, would be,

For the year	ending	June 30,	1894.....	$80,657	94
"	"	"	" 1895.....	71,362	58
"	"	"	" 1896.....	78,055	20
"	"	"	" 1897.....	71,768	51

Out of these amounts, which are all that would have remained for the years named under the commissioners' schedule, complainant would have had to meet its fixed charges upon so much of its investment as was properly applicable to the local business. If the mortgage indebtedness upon the South Dakota lines be scaled down, in accordance with the valuation placed upon them by the court below, to $10,000,000, the proportion of that amount properly chargeable against the local investment would also be scaled down and would be,

For the year	ending	June 30,	1894.....	$2,200,000	00
"	"	"	" 1895.....	2,600,000	00
"	"	"	" 1896.....	2,100,000	00
"	"	"	" 1897.....	1,900,000	00

The bonds secured upon this property bore an average rate of interest of 5.69 per cent. This would make the interest charge on the local investment,

For the year	ending	June 30,	1894.....	$125,180	00
"	"	"	" 1895.....	147,940	00
"	"	"	" 1896.....	119,490	00
"	"	"	" 1897.....	108,110	00

and the company would have had only the amounts above shown as net earnings with which to pay this interest. Instead of having money with which to pay the 5.69 per cent. interest, it would have had only an amount sufficient to pay,

For the year ending June 30, 1894	3.67%
" " " " " " 1895	2.74%
" " " " " " 1896	3.72%
" " " " " " 1897	3.78%

The deficit in its interest account on the local investment would have been,

For the year ending June 30, 1894	$44,522 06
" " " " " " 1895	76,577 42
" " " " " " 1896	41,434 80
" " " " " " 1897	36,341 49

For the convenience of the court, we tabulate these figures so that they may be seen at a glance.

If operating expenses are no greater locally than upon system—

	Year ending June 30, 1894.	Year ending June 30, 1895.	Year ending June 30, 1896.	Year ending June 30, 1897.
Value of property used in local business as assigned, and amount of bonded indebtedness thereon	$2,200,000 00	$2,600,000 00	$2,100,000 00	$1,900,000 00
Average rate of interest on bonded indebtedness	5.69%	5.69%	5.69%	5.69%
Interest charge on property used locally	$125,180 00	$147,940 00	$119,490 00	$108,110 00
Net earnings as per table No. 1, page 50	80,657 94	71,362 58	78,055 20	71,768 51
Deficit in interest	$44,522 06	$76,577 42	$41,434 80	$36,341 49

In this table the original local valuation, the local gross earnings and the reductions in local gross earnings are all the identical figures found by the court; we simply insert the operating expenses that were actually incurred on the system, and then show what proportion of the interest charge the amount left would pay.

This brings us face to face with the question: Is a railroad company entitled to charge such rates as will earn not only its operating expenses but interest charges on an honest, valid and subsisting bonded indebtedness? If the court below was correct, the bonded indebtedness was neither to be considered on the question of value, nor upon any other question, for it was entirely ignored in every computation. But it has been established by this court—

First. That the valid bonded indebtedness must be considered on the question of value (*Smyth* v. *Ames*, *supra*), and

Secondly. That it must be considered in determining what compensation a railroad company is entitled to receive for service performed. (*Reagan* v. *Trust Company*, *supra.*)

The table last above given shows that allowing local operating expenses to be no greater than the operating expenses of the system as a whole, complainant would have earned under the commissioners' schedule less than half of its interest charge in one of the years, and but little more than half in the others.

We have computed the interest charge upon the original valuation fixed by the court, as properly applicable to the conduct of local business; but the court held that by virtue of the reduction under the commissioners' schedule,

the local valuation was reduced to the extent of $300,000 each year. We have pointed out the fallacy of this assumption, but even if the court below was correct in it, the result would still be that complainant could not earn sufficient to pay its interest charge. The valuation fixed by the court after the reduction, and as the result of the reduction, were

For 1894,	$1,900,000	upon which,	interest at	5.69%	would be	$108,110.00
" 1895.	2,300,000	"	"	"	"	"	130,870.00
" 1896,	1,800,000	"	"	"	"	"	102,420.00
" 1897,	1,600,000	"	"	"	"	"	91,040.00

The result is:

	Interest charge.	Net earnings.	Deficit in interest charge.
For the year 1894	108,110 00	$80,657 94	$27,452 06
" " 1895	130,870 00	71,362 58	59,507 42
" " 1896	102,420 00	78,055 20	24,364 80
" " 1897	91,040 00	71,768 51	19,271 49

This, then, is the conclusion the court below would have reached if it had not ended its computations before it reached a conclusion at all. If instead of stopping at gross earnings it had pursued its investigations to the end of the issue involved in the case, it would have found that upon its own showing complainant would not be "allowed" to earn its valid fixed charges, to say nothing of profit or reward.

The method pursued by the court below is, we venture to say, a novelty in judicial procedure.

First. With abundance of testimony showing the value of complainant's property in South Dakota to be more than nineteen millions of dollars—or if all the testimony for defendants were taken as true, more than

eighteen millions of dollars—the court of its own motion makes a guess that the value is ten millions of dollars, and embodies its guess in the decree.

Secondly. In computing the effect of the reduction upon the earning power of the property, the court reduces the local valuation *pari passu* with the reduction, and then finds the effect of the reduction, not upon the valuation with which it started, but upon a valuation resulting from the very reduction in question.

Thirdly. The computation ends with figures which do not pretend to show anything beyond the effect of the reduction upon gross earnings, and leaves the question of operating expenses and net earnings absolutely untouched.

Fourthly. It ignores the admittedly valid fixed charges.

The Increased Cost of Local Operations.

We have just shown the effect of the commissioners' reductions upon complainant's earnings if the local operating expenses in South Dakota were no more than the operating expenses of the system; but the fact which stands out most prominently in this record, is that local operations can only be carried on by incurring a largely increased expense. The system operating expenses include all the through business, and are affected by the economies which can always be introduced in the management of a large system. We have shown that if the court had allowed to the South Dakota lines even the same operating expenses as were incurred on the system, the result would have been an actual deficit in the interest charges, and no reward of any kind for the owners of the property. But if the court had considered, as we

submit it was bound to do, the increased cost of local operations, the errors into which it fell would have been still more striking. The testimony is perfectly clear and undisputed that local operations have not been and cannot be carried on in South Dakota for less than 85 per cent. under existing rates. If the court had taken that amount of money from the reduced gross earnings, upon which its computations were made, it would have plainly appeared that under the commissioners' schedule, the business could only have been conducted at a loss. There would have been nothing for the bondholders, nothing for the stockholders, and not enough gross earnings to pay the operating expenses, thus producing an actual deficit as the result of the local operations. That deficit would have been, as shown by table No. 2, page 51 of this brief,

For	the	year	ending	June	30,	1894.....	$4,083 42
"	"	"	"	"	"	1895.....	3,528 03
"	"	"	"	"	"	1896.....	3,282 28
"	"	"	"	"	"	1897.....	3,059 41

It is not necessary to pursue the inquiry further, by showing what would have been the loss if the local operating expenses were more than 85 per cent. for the years in question which the evidence clearly discloses they were. The computations made by the court below and embodied in the record constitute the best possible refutation of the conclusion which it reached.

No combination of figures can make it right, and no elaboration of opinion can make it legal, to determine the effect of a rate by considering only gross earnings. The learned judge stopped his computations when it would have been easy to go forward to the end; and if he had gone forward—as a determination

of the issues imperatively required—he would have seen, for it is perfectly apparent, that the action of the commissioners, if carried out, would deprive complainant of its property without due process of law, and deprive it of the equal protection of the laws.

GEORGE R. PECK,
A. B. KITTREDGE,
Solicitors for Complainant.

FILED
OCT 30 1899
JAMES H. McKENNEY,
Clerk

No. 131.

Reply Brief of Petitioner-Plaintiff in Error.

Filed Oct. 30, 1899.

Supreme Court of the United States.

131

October Term, A. D., 1899.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL.

APPELLANT'S BRIEF IN REPLY.

GEORGE R. PECK,
A. B. KITTREDGE,
Solicitors for Appellant.

PRESS OF E. V. MUDGE.

IN THE

Supreme Court of the United States.

October Term, A. D., 1899.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL.

APPELLANT'S BRIEF IN REPLY.

Counsel for appellees have filed a brief of 191 pages in support of the decree below. Very little if any of it requires attention upon our part. We do not feel called upon to point out, what must be so apparent to the court, that it lacks the logical coherency which is necessary if it is expected that it will aid the court in its investigations of the questions involved. The testimony is all embodied in the record, and there can be no dispute as to what it is.

Counsel for appellees draw some conclusions from it which are clearly unwarranted, and also make some criticisms upon the estimates of appellant's witnesses, but their conclusions and their criticisms are made nugatory by the concessions which they have been forced to make by the overwhelming strength of the testimony against them. In this case, as in *Smyth vs. Ames*, the controlling question is that of the relation which the local operating expenses bear to the local earnings. Whether the value of the property used be large or small, the practical inquiry is: What are the net results of its operation? As we pointed out in our brief, it is not difficult to determine with entire accuracy:

(1.) The entire earnings of the railroad system as a whole.

(2.) The entire operating expenses of the system as a whole, and what percentage these operating expenses are of the entire earnings.

(3.) The entire local earnings within the State of South Dakota.

These three easily ascertainable items leave a fourth, namely, the local operating expenses in South Dakota. They are to be ascertained, and can only be ascertained, by comparisons based upon experience, by the opinions of expert witnesses, and by an analysis of the expenditures which must necessarily be made in conducting the local operations. All these methods of determining the amount of local operating expenses were followed with the most painstaking care by complainant, and the

result is that it is conclusively proven that the local operating expenses in South Dakota have been, and necessarily must be, much larger than the operating expenses of the system as a whole.

The lowest amount which, under the testimony, can be assumed as local operating expenses, is 85 per cent of the earnings, and it is very plain that, in fact, they amount to much more. Not only is the proof clear and unanswerable on this point, but counsel for appellees do not pretend to controvert it. Nowhere in their brief is it denied that local operating expenses are greater than system operating expenses. On the contrary they frequently distinctly admit it.

Speaking of the testimony of Mr. Truesdale, who had testified that assuming the system operating expenses to be only 60 per cent, the local operating expenses in South Dakota would amount to 85 or 90 per cent. (Rec. 327), counsel on page 154 of their brief, say:

> "The witness does not say that the cost would be 85 to 90 per cent of the $102,289.23 revenue from local freight, but that it would be 85 to 90 per cent of all the business, to wit: The total revenue of $1,074,741.86. This would mean that the freight would cost about $850,000 to $900,000. *This is a little less than Mr. Earling's estimate, and a little more than our estimate, and considering that Mr. Truesdale was expressing an opinion and, not testifying from positive knowledge, he has come very close to the facts.*"

It is creditable to the candor of counsel, that they have not wasted time in an effort to dispute the plain effect of the testimony upon this branch of the case. It is, however, interesting to note the comments of counsel on Mr. Truesdale's testimony. They inform the court that:

> "The witness does not say that the cost would be 85 to 90 per cent of the $102,289.23 revenue from local freight, but that it would be 85 to 90 per cent of all the business, to wit: The total revenue of $1,047,741.86."

This latter sum consists of the local freight earnings in the State of South Dakota for the year 1897, and a mileage proportion of all the interstate freight business done in the State. Just what force there is in counsel's observations we do not perceive, for it is very certain that if the operating expenses for the *entire* freight business in South Dakota, local and interstate, amount to 85 or 90 per cent, the operating expenses on the strictly local business will be as much, and probably a little more.

A large portion of the brief for appellees is devoted to a criticism of the figures and estimates of Mr. Earling, Mr. Whittemore, and Mr. Bates. We can say nothing which will point out more clearly than it now appears from the testimony of these gentlemen, that they were fair, intelligent, capable, and honest witnesses. Appellees introduced testimony on rails, ties, and buildings. On rails, their witness was Professor Whitney, of the Wisconsin State

University, who flatly contradicts Mr. Earling, Mr. Chappell, Mr. Harahan, Mr. Truesdale, and Mr. Harris on the question of the average life and usefulness of a steel rail. These latter gentlemen are all practical railroad men of many years experience, are now engaged in the operation of great lines of railroad, and are constantly dealing with the subject about which they were examined, and their testimony shows that the average life of a steel rail is about 16 years. (Rec. pps. 226, 314, 337, 338, 347, 596, 644, 645, 646.) Professor Whitney, on the contrary, testifies that the average life of a rail is from 32 to 50 years (Rec. 877). It is very evident that someone is mistaken on this subject, and we submit that it is much more likely to be the Professor than the five practical railroad men whose testimony he contradicts.

As to buildings, apellees introduced as a witness R. J. Booth, a contractor of Sioux Falls, whose testimony placed the cost of constructing buildings at about 30 per cent less than the testimony of Mr. Bates, but his figures were based entirely upon present prices and do not pretend to dispute the original cost as testified to by Mr. Bates.

The criticism of counsel upon complainant's testimony is well illustrated by what they say about the item "Material on hand," which Mr. Whittemore, the chief engineer, placed at $300 per mile. Counsel cite the annual reports for 1896 and 1897 of complainant, which give for material on hand in 1896, $1,846,511.36, and in 1897, $1,911,287.76. Counsel divide these amounts by a mileage of

7,866.88, or 1,700 miles more than the entire mileage of main track, which was the basis upon which Mr. Whittemore found that material on hand was $300 per mile. (See testimony of Mr. Whittemore, Rec. 421, 422; also Exhibit No. 2, page 6.)

Counsel complain that they did not have access to the records of the company; that they were in our possession and ought to have been produced for their inspection. To show how groundless is this complaint it is only necessary to refer to the Record, page 22, which shows that at the very first day upon which testimony was taken, and while Mr. Winne, the general auditor and custodian of the records which bear upon earnings and disbursements of all kinds, was testifying, the following entry was made:

> "Counsel for complainant now states that all the books, records, papers, documents in the office of the general auditor, in respect to which testimony has been given by Mr. Winne, are in his office in this building and will be produced here at any time while the testimony is being taken at the request of counsel for the defendants."

Throughout the entire taking of testimony free access was given to counsel for defendants to records, statistics, books, and documents, and every facility was accorded them promptly upon demand, and we must confess to some surprise that they make any complaint on this score.

Counsel, on page 188 of their brief, refer to the income account, which they conceive to be cash profits on hand, as a surplus in money put aside

from the earnings of the system after paying operating expenses, fixed charges and dividends. Counsel had a full explanation of this account in the testimony, and understood perfectly that it was not at all what they claim it to be in their brief. Of the amount named ($8,509,719.85), $2,500,000 had been paid in the last dividend, prior to the taking of the testimony, the balance represents the amount necessary for a sinking fund with which to redeem bonds, and the amount locked up in supplies, fuel, and necessary working capital, which every railroad company must have. Mr. Winne's testimony fully explains it, as follows:

> "Counsel has inquired in regard to the surplus earnings of the company. You may explain in detail regarding that fund.
>
> "A. The surplus shown by the balance of income account June 30, 1897, amounts to some eight and one-half million dollars and is the accumulation of what we call undivided income from the formation of the company to this time. Of that amount some two and one-half million dollars have been divided since this report, being the dividend for the last half of the fiscal year ending June 30, 1897, which dividend was not declared until after the accounts were closed, and in this case the dividend was declared in October, 1897. The balance of the surplus, as I explained, is the growth since 1863, and includes all working capital which all roads must have in order to do business. For instance, we have one million nine hundred and eleven thousand dollars locked up in material, fuel, and supplies, for the operation of the road,

which is kept constantly on hand; also provision for purchase of bonds for sinking fund; a large amount has been expended on property from 1863 to this time, for which the treasury could not be reimbursed, and which the earnings account would have to stand, and which must eventually be taken out of the surplus account.

"Q. You have spoken of the working capital or supply account. Explain in detail what that is. Why is it necessary, if such is the fact, for the operation and proper management of the company to keep this account?

"A. The account of fuel and materials on hand includes materials of all kinds, rails, ties, lumber, also steel, copper, wheels, axles, and everything that is used in the operation and construction. We are obliged to keep a large amount of fuel on the western lines to be prepared in case of snow blockades, when we are not able to get coal. The material comprises everything which may be needed.

"Q. How about lumber and bridge timber?

"A. It is included in the account.

"Q. You have spoken of the sinking fund. Explain what that is?

"A. Certain of our mortgages provide that a certain number of bonds must be redeemed each year. The Dubuque Division bonds and the Wisconsin Valley Division bonds I have in mind now.

"Q. And this sinking fund is a sum of money set apart to redeem the bonds as they become due on the mortgage contract?

"A. Set apart to redeem these bonds."

(Rec., 164, 165.)

We mean no disrespect to counsel when we say that in their brief they do not seem to have at all appreciated the real issue. The question which the court below was called upon to answer was: Will the rates prescribed by the South Dakota Board of Railroad Commissioners admit of the complainant earning "such compensation as, under all the circumstances, is just to it and to the public?" We have shown by the testimony what the local earnings in South Dakota were for the four years prior to the filing of the bill, and the court has found in its decree that we showed such earnings correctly. We have shown that the operating expenses of complainant's system were, during the four years named, never less than 60 per cent and in one year were over 64 per cent. We have shown, and it has not been disputed, that these operating expenses of the system were a very fair, and even low per cent. We have shown that taking a per cent lower than any of them, namely 60 per cent, the operating expenses on the local business of South Dakota can not be less than 85 per cent, and are undoubtedly more. Counsel distinctly admit this, and the proof overwhelmingly esfablishes it. This, then, leaves only the question: What would the prescribed rates produce in the way of net earnings? The answer is: Nothing. That it to say, the court below has held, in effect, that a rate which does not permit a carrier to earn anything, is a reasonable one.

The court below was content to conclude its computations with the gross earnings, and the percentage they bear to the assumed local capital, and did not stop to inquire whether complainant would have

anything left after paying the necessary operating expenses. Table No. 2, on page 51 of our brief, merely completes the computations which the court below left in an unfinished state, and the result—and it is a result from which there is no escape—is a loss for each year, of the four years upon which the court below made its calculations.

GEORGE R. PECK,
A. B. KITTREDGE,
Solicitors for Appellant.

○

No. 131.

Brief of Stall for Appellees.

Supreme Court of the United States.

October Term, 1898.

Filed Oct. 4, 1899.

No. 1378.

Office Supreme Court U. S.
FILED
OCT 4 1899
JAMES H. McKENNEY,
Clerk

THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

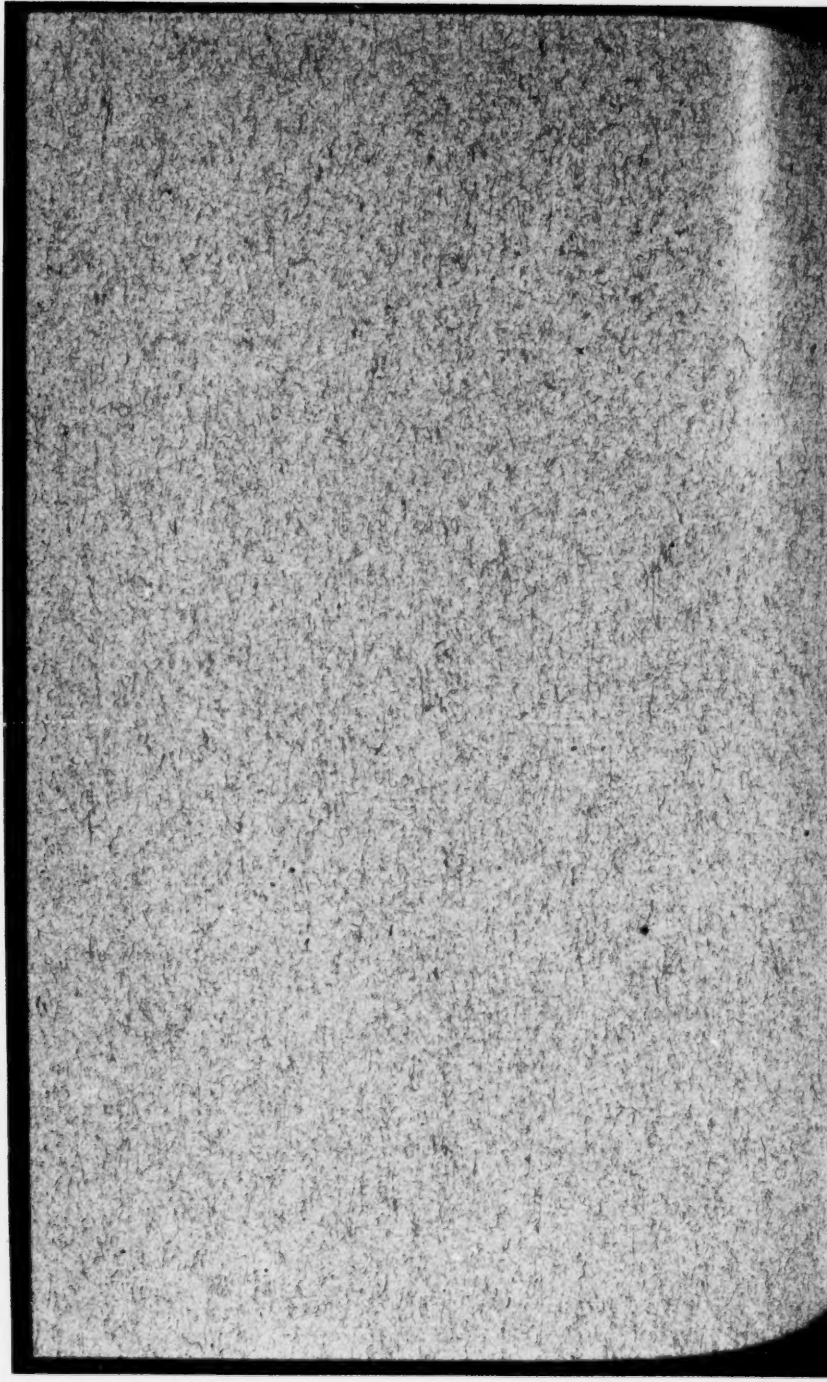
vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL., DEFENDANTS.

Appeal from the Circuit Court of the United States for the District of South Dakota.

BRIEF AND ARGUMENT FOR DEFENDANTS.

JOHN L. PYLE,
Attorney General, South Dakota.
W. O. TEMPLE AND
T. H. NULL,
Solicitors and of Counsel for Defendants.



Supreme Court of the United States.

October Term, 1898.

No. 396.

THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL., DEFENDANTS.

Appeal from the Circuit Court of the United States for the District of South Dakota.

BRIEF AND ARGUMENT FOR DEFENDANTS.

MAY IT PLEASE THE COURT:

On Februrary 3rd, 1897, the legislature of South Dakota passed an act relating to common carriers, being Chapter 110 of the Session Laws of 1897.

Section 20 of said act reads as follows:

§ 20. COMMISSIONERS TO MAKE SCHEDULES OF MAXIMUM RATES AND FARES—PUBLICATION OF—TAKE EFFECT WHEN.] The board of railway commissioners of this state are

hereby empowered and directed to make for each of the railroad corporations doing business in this state, as soon as practicable, a schedule of reasonable maximum fares and rates of charges for the transportation of passengers, freight and cars on each of said railroads, and said power to make schedules shall include the power of classification of all such freights, and it shall be the duty of said commissioners to make such classification. Provided, the maximum compensation per mile for the transportation of any person with ordinary baggage, not exceeding one hundred and fifty pounds, shall not be greater than three cents per mile between points where the distance traversed is entirely within this state, except upon narrow gauge railroads, and said railroad commissioners shall for the purpose of making a maximum fare and charges for the transportation of passengers and freight, classify said railroads as far as practicable according to the gross amount of their respective annual earnings per mile within the state for the three years preceding the time of making the classification, and said classification may be changed from time to time as the railroad commissioners may order. Said schedules so made by said commissioners shall in all suits brought against such railroad corporations, wherein is in any way involved the charges of any such railroad corporation for the transportation of passengers and freight or cars or unjust discrimination in relation thereto, be deemed and taken in all courts of this state as prima facie evidence that the rates and passenger fares therein fixed are reasonable and just maximum rates of charges for the transportation of passengers, freight and cars upon the railroads for which said schedules may have been respectively prepared. Said commissioners shall from time to time, and as often as circumstances may require, change and revise said schedules. When any schedule shall have been made or re-

vised as aforesaid, it shall be the duty of said commissioners to cause notice thereof to be published for two successive weeks in two public newspapers published, one in the county of Minnehaha and one in the county of Lawrence in this state, which notice shall state the date of the taking effect of said schedule, and said schedule shall take effect at the times so stated in such notice, and a printed copy of said revised schedule shall be conspicuously posted by such common carrier in each freight office and passenger depot upon its line or lines. All such schedules, so made, shall be received and held in all such suits as prima facie the schedule of said commissioners without further proof than the production of the schedule desired to be used as evidence, with a certificate of said railroad commissioners, that the same is a true copy of the schedule prepared by them for the railroad company or corporation therein named, and that notice of making the same has been published as required by law; Provided, that before finally fixing and deciding what the original maximum rates and fares and classifications shall be, it shall be the duty of the railroad commissioners to publish ten days' notice in two daily papers published, one in the county of Minnehaha and one in the county of Lawrence, setting forth in such notice that at a certain time and place they will proceed to fix and determine such maximum rates, fares and classification; and they shall at such time and place and as soon as practicable, afford to any person, firm or corporation, or common carrier who may desire it, an opportunity to make an explanation or showing or to furnish information to said commissioners on the subject of determining and fixing such maximum rates and classification; and in any event the original schedule of rates and classification of freights on all lines of railroads in South Dakota shall be fixed and shall go into effect on the first day of July, 1897.

The defendants, constituting the board of railroad commissioners of the state of South Dakota, having taken the preliminary steps required by said law, did, on the 26th day of August, 1897, promulgate, publish and serve a schedule of maximum rates of charges for the transportation of passengers, freight and cars for each of the railroad corporations, including the complainant, doing business in South Dakota.

On the 27th day of August, 1897, the complainant instituted this action to enjoin the enactment of such schedule. At the same time seven other companies instituted similar proceedings.

It is claimed in the bill of complaint that the schedule, if enacted, would not afford to complainant an adequate compensation for its service and result in taking its property without just compensation or due process of law, and would deprive it of the equal protection of the laws.

The bill of complaint, answer and replication constitute the pleadings. No question arises as to the sufficiency of either of the pleadings, and the issues will be found to be almost entirely issues of fact.

The issues may be briefly stated as follows:

The value of complainant's lines of railway in South Dakota.

The value of complainant's equipment on its South Dakota lines.

The annual expenditure required to maintain complainant's railway in South Dakota.

The annual expenditure required to maintain complainant's equipment in South Dakota.

The annual operating expenses in South Dakota.

The distribution of the cost of maintenance and operation as between the freight and passenger service, and the distribution of the cost of the freight service as between the inter-state and local traffic, and the distribution of the cost of the passengar service as between the inter-state and local traffic.

The annual revenues derived from the freight and passenger traffic, local to the state of South Dakota.

The amount which the local traffic should contribute to capital account for the payment of interest and dividends.

The reasonableness of the proposed rates.

At the time this action was instituted the complainant owned and operated 6,148.23 miles (main track) of railway, of which 1,101.06 miles were in South Dakota.

Its capital consisted of $75,081,500 of capital stock and $137,762,000 of funded debt, amounting to $212,843,500 or $12,211.89 of stock and $22,406.77 of debt per mile.

During the fiscal year ending June 30, 1897, complainant's revenues from all sources amounted to $30,468,767.99 or 14.3 per cent. of its total capital.

Out of this revenue complainant paid:

Operating expenses	$18,577,539.08
Interest	7,488,746.85
Dividends	3,737,453.00
Passed to surplus	683,029.06
Total	$30,486,767.99

Complainant operates its great system of railway as an entirety and does not keep separate accounts of its transactions in each of the several states through which its lines of railway extend. In order to comply with the requirements of the laws of the several states requiring statements of the operations of the railway within the borders of the state complainant has adopted a system of percentage and division by which it makes an approximated statement of its operations in any particular state. Such statements showing complainant's annual operation in South Dakota have been filed with the defendant board of commissioners.

For the purposes of this case, such approximated statements have not been accepted and an effort has been made to ascertain the actual result of complainant's operations in South Dakota, particularly for the fiscal year ending June 30, 1897.

There is no dispute as to the law governing this case. The issues are purely issues of fact and will be discussed in the order in which they have been stated.

The value of complainant's railway in South Dakota.

Complainant does not state the value of its property in its bill of complaint, and the first intimation of their claims in this respect is found in the testimony of Mr. Winnie, the auditor of complainant company.

He testifies that the road in South Dakota is mortgaged for $19,365,247.16 or $17,587.82 per mile (Exhibit 4, page 11), and that the capital stock amounts to $12,211.89 per mile (Exhibit 5, page 13), making a total of $29,799.21 per mile.

Complainant next introduces the testimony of Mr. Whittemore, the cheif engineer of complainant company. He testifies that he has occupied this position since the organization of the company in 1863 and that all its properties have been acquired or constructed under his supervision.

He further testifies:

Q.—Have you made careful estimate of the cost of the South Dakota line?

A.—I have.

Q.—In what manner have you computed the original cost of the South Dakota line?

A.—From data in my office, from the price paid at the time for the work and materials as ascertained from the auditor's books and from my own record and from my remembrance of the whole work, collectively taken together. (Pages 396-397).

The estimate referred to was offered in evidence and marked "Exhibit 25," (page 423), and is as follows:

EXHIBIT 25.

ESTIMATED COST OF CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

Length of Main Track, 1,101.06 miles.	Of Side Track, 86.15 miles.
12,442,000 Cu. Yds. earthwork @ 15.16c	$ 1,886 207 00
5,000 Cu. Yds. riprap @ $1.50	7,500 00
11,011,000 Ft. B. M. Timber in bridges and culverts, (including cost of erection), @ $30	330,330 00
467,600 Lin. feet piles in bridges @ 35c	163,160 00
8 Truss bridges	35,495 00
286 iron pipe culverts in place of wooden ones, betterment, @ $50	14,300 00
106,300 tons (gross) rails, average cost @ $46 761	4,970 627 00
8,310,600 lbs. track spike @ 2½c	207,765 00
418,000 pairs of rail joint splices, complete, @ $1	418,000 00
3,562,000 cross ties @ 30c (3,000 ties to the mile)	1,068,600 00
690 switches, complete, @ $100	69,000 00
10 railroad crossings, @ $200	2,000 00
1,187 21-100 miles track laid and surfaced @ $450	531,244 00
267 miles of track ballasted, @ $500	133,500 00
1,101 miles of track, the material for which was moved to the front from the nearest point of distribution at a cost per mile of $140	154,140 00
505 miles of right of way fenced, @ $280	141,400 00
32,000 panels snow fence (100 miles) @ $2.10	67,200 00
288,000 ft. B. M. crossing plank (for 1,200 crossings), @ $20 per M	5,760 00
1,000 cattle guards, estimated, @ $10	10,000 00
Freight on track material, @ ¾c per T. M	2,342,323 00
Freight on bridge and culvert material, @ ¾c per ton mile	108 862 00
Freigth on contractor's tools and supplies @ ¾c per ton mile	8 250 00
Freight on contractors' teams to work, @ ¾c per ton per mile	6,600 00

6,600 men transported to the work (2c per mile)...		66,000 00
256 station sign boards, @ $6.....	$1.536	
1,200 highway sign boards, @ $5.....	6,000	
40 R. R. Crossing sign boards, @ $6.....	240	
40 R. R. Crossing stop boards, @ $6.....	240	
2,000 whistle posts, @ $1.....	2,000	
510 mile posts, @ $1.....	510	
1,100 rail rests @ $1.....	1,100	11,626 00
Cost of buildings, including shops, freight and passenger stations, coal sheds, tool houses, stock yards and water stations, as per estimate of bridge and building department....		940 606 00
Cost of right of way and station grounds, 1.101 miles @ $128 per mile.....		140 928 00
Cost of telegraph lines, instruments and tools owned solely by C., M. & St. P. Ry. Co.....		40 626 00
One-half cost of telegraph lines, instruments and tools owned jointly with telegraph company		30,656 00
Engineering, superintendence, legal and general office expenses, estimated, @ $300 per mile of main track.....		330 300 00
		$14,246,505 00
Add interest on the cost as above given for one-half the time during which the line was under construction, one year @ 6 per cent.....		854,790 00
Track tools, 125 sections, @ $138 each.....		17.250 00
Station furniture and supplies 94 stations, @ $78.....		7,332 00
		$15,125,877 00
For betterment to roadbed and bridges, etc., estimated at 5 per cent of the above.....		756,294 00
Total estimated cost of lines in South Dakota, exclusive of equipment, shop plants outside of the state and stock material.....		$15,882,171 00

Making total cost per mile of main track, exclusive of equipment, shop plants outside of the state and stock of material	14,425 00
To which add for permanent supply of cormant, or non-earning material, kept in store and without which the railway could not be successfully operated	300 00
Total investment per mile, exclusive of equipment and shop plants outside of the state	$14,725 00

Chicago, January 25, 1898.

By this statement complainant fixed the cost of construction at $15,882,171.00 or $14,425.00 per mile.

Inasmuch as complainant offered no other testimony on this issue, Exhibit 25 constitutes complainant's case on the question of value of the roadway.

It will be noticed that this statement is an estimate and not a record of actual expenditures.

The complainant has in its possession the only record in existence that shows the actual expenditure made in acquiring these properties.

THE AUDITOR TESTIFIES.

Q.—Mr. Winnie, in the account of cost of road and equipment the item stated at the end of the last fiscal year, $212,594,714.15—what does that include?

A.—That includes the cost to this company of the property which they had at that time.

Q.—Exclusively railroad property?

A.—Exclusively railroad property.

Q.—And does that represent the actual cost, so far as you know?

A.—It represents the actual cost so far as I know.

Q.—That account was begun with the organization of the company?

A.—Yes, sir.

Q.—And has been continued from that time to the present?

A.—Yes, sir. (Pages 37-38).

Q.—Can you tell from the records of your office the consideration paid for the lines that were acquired by purchase?

A.—Yes, sir. (Page 39).

Q.—Mr. Winnie, in the construction of South Dakota lines, was there a considerable portion of the lines constructed under what is known as the Patterson extension?

A.—Yes, sir.

Q.—And have you in your office a distinct account of the cost of the construction of that extension?

A.—Yes, sir.

Q.—What particular lines in South Dakota were constructed under the construction known as the Patterson extension?

A.—Pattersonville extension, it is called. The account of the Pattersonville extension includes the construction of the line from Pattersonville, now called

Hull, in Iowa, to Chamberlain on the Missouri, and also the line from Marion Junction to Running Water on the Missouri.

Q.—And was the cost of constructing that extension kept in a separate, distinct account until about the end of the year of the construction of the extension and then charged in a lump sum to cost of road and equipment?

A.—It was so kept.

Q.—And can you furnish us with a detailed account of that construction, as shown by the books of your office?

A.—I can, sir. (Pages 55 and 56).

This account was furnished and offered in evidence as defendant's Exhibit 55, but owing to its volumnious character only portions of this account have been included in the printed record. (Pages 762-763).

From the foregoing it will be seen that the complainant has a record from which it could have given us the actual expenditures.

We will now consider the estimate item by item.

The first item, 12,442,000 yards of earth work, we have been unable to investigate. In December, 1897, the defendants asked complainant for a profile of its road in South Dakota. The complainant promised to furnish it, but no profile was furnished until about April 30th, 1898, when a pretended profile was present-

ed to the defendants by the complainant, but it did not contain the data from which an estimate of the earthwork could be made, although it was well known that that was the purpose for which the profile was wanted. (Pages 821-2-3-4 5-6-7 and 839).

We will next consider the item of rails. Mr. Whittemore has charged in his estimate 106,300 tons of rails at $46.76 per ton. Mr. Whittemore testifies that he figured on 56-lb. rails for original construction, part of which was iron and part steel rails.

The testimony shows that since the lines were constructed the rails used in the original construction have been replaced with relayer steel weighing 60 lbs. to the yard.

Mr. Earling, the general manager of the complainant, testifies as follows concerning these rails:

Q.—Could you tell me how many tons of new rails were actually laid on your South Dakota lines last year?

A.—The number of miles of rails that were replaced in South Dakota for the year ending December 31, 1897, was 125 miles and 851 feet; these were not all new rails. Most of them—I think all were steel rails that had been taken up from other lines and which had been straightened and the ends sawed off where they had been kinked a little and re-drilled and put in first-class condition.

Q.—Were they all steel rails?

A.—Yes, sir; they were all steel rails.

Q.—And at what price were they charged up?

A.—*At $24.50 per ton, delivered in South Dakota.*

Q.—Where did these second-hand rails come from?

A.—*From various parts of the system, principally from such lines as required heavier rails for the heavier traffic.* These sixty-pound rails were taken up from those lines, and the perfect rails were selected. They were sent to the rail mill where any little imperfections were removed, such as a kink at the end, and a small part of the ends were sawed off; they were re-drilled, straightened and put in first-class condition and then shipped out to South Dakota.

Q.—*How long had these rails been in use upon other portions of your system?*

A.—*Some seven years, some eight years,* more or less, I cannot tell you exactly.

Q.—And what weight did you say they were; did you say they were all sixty-pound rails?

A.—To the best of my knowledge they were all sixty-pound rails. (Pages 268-269).

The rails having been in use some eight years before being laid in Dakota would not weigh 60 pounds, as some wear must result from the use.

By reference to Mr. Earling's estimate of cost of maintenance on page 302, we find that he estimates the

annual rail renewal for the South Dakota lines at 6,488 tons, and that he allows as salvage for old rails taken out of the track 5,633 tons. This would indicate an annual wear of 855 tons. If these rails were in use for eight years there would, according to Mr. Earling, have been 6,840 tons worn away.

On the basis of 60-lb. rails, 94 tons 640 lbs. to the mile, for 1,101 miles, we have 103,719 tons less the 6,840 tons of wear, making 96,879 tons of relayer steel rails in the track. This makes a reduction in the quantity of 9,421 tons, and at the price figured on by Mr. Whittemore, $46.76, a reduction of $440,525.96 in value.

Mr. Whittemore has figured the value at $46.76. On page 401 he tells how he arrived at this valuation.

Q.—106,300 tons of rails, average cost $46.76, $4,970,627; is that correct?

A.—I believe it is. Shall I state how I arrived at that?

Q.—You may if you choose.

A.—I took the miles built certain years. I took the average price of rails paid during that year and multiplied the price paid each year by the tons used each year and when the aggregate was ascertained divided it by the number of tons, which gave $46.76 as the average price paid.

It is quite clear from the testimony that very little, if any of the rails used in the original construction are

now in the track, but that the track is now laid with relayer steel.

Consequently the prices paid 18 years ago for rails not now in use cannot be accepted as the basis for the present fair value.

Mr. Earling testifies (page 298) that this relayer steel has a known and fixed value, that when new rails sell at $29 these relayers would sell for about $20 or $22 per ton, and in his estimate of the relayer steel for renewal and repair he has figured the relayer steel at $24.50 in South Dakota and (page 297) he testifies that he calculates about $4.50 per ton freight, leaving the value exclusive of freight at $20 per ton.

Mr. Earling's figures are higher than they ought to be, because these old rails are not as valuable per ton as new rails, and Mr. Whittemore testifies (pages 413-414):

Q.—I notice that you estimate the average cost of these rails at $46.76 a ton?

A.—Yes, sir.

Q.—Do you know what the present market is?

A.—No, sir. I do not know. It has been all the way from *$18 to $25 in the last few months.*

Q.—And steel could have been had as low as $18 in the last year?

A.—Yes, sir.

Q.—And it is a fact, is it not, that work has been done in the past year at $20?

A.—Rails?

Q.—Yes, sir?

A.—Yes, sir; it is a fact.

If this is true, that new steel is only worth $18 to $20 a ton, then, according to Mr. Earling's testimony just quoted, where he estimates the value of relayer at 70 to 75 per cent. of the cost of new steel, then this relayer is not worth over $15 a ton.

At the close of each fiscal year the directors of the complainant make an annual report to the stockholders of the company. The annual report for the fiscal year ending June 30th, 1897, was offered in evidence by the complainant, with the agreement between counsel that the same may not be printed in the record but may be produced at the hearing. (Page 612).

Such portions of this report as we deemed of special value have been included in the printed record.

One of the many valuable things contained in this little volume is an inventory of "Material and Fuel on Hand," and is found on page 34 of the report and on page 716 of the printed record.

In that inventory we find this item:

Old steel rails, 16,065 tons, $173,947.01, which figures out $10.82 per ton.

That this refers to the relayer steel and is a valuation fixed by the officers of the company is clearly shown

by the testimony of the auditor, Mr. Winnie, (pages 43-44), as follows:

Q.—I see in your account of material on hand, on page 34, of your last annual report, an item: "New Steel Rails, 743 tons," with a certain sum set opposite that as representing the present value; that is what it is intended for, is it?

A.—Yes, sir.

Q.—That is, 743 tons of new steel rails are valued at $18,119.31?

A.—Yes, sir.

Q.—Those are rails now on hand to be used in replacing or construction, as the occasion may require?

A.—Yes, sir.

Q.—Are they in store at any particular place, or are they distributed over the system?

A.—They are probably quite well distributed over the entire system, so that in case of a breakage we will have one or two on hand.

Q.—"Old Steel Rails 16,065 tons," with a value indicated of $173,947.01. How is that value determined?

A.—That value is put upon them, based upon the price of new material. It is the price that is fixed by the managers of the company; and it fluctuates with the price of new material.

Q.—And at the rate there indicated being somewhere near $11 per ton?

A.—Yes, sir.

Q.—New rails are something like $24?

A.—I don't know the present quotation.

Q.—Old steel rails are rails that have been in use, are they?

A.—Yes, sir.

Q.—Describe the treatment which they receive, so as to give them any value?

A.—When new rails are put in, of course a corresponding length of old rail comes out. The old rails are sorted over and those that are fit to be used in places of lighter traffic or in side-tracks, without there being any labor expended on them, are put in one class at a valuation. Others of them have to go through our rail mill to be straightened and sawed and re-punched, perhaps, are put into another valuation, and still another class, that are not fit for use at all, are sent to the rail mill to be sawed up into lengths and sold as scrap. When the value of these three classes of rails is determined, that amount is credited to renewal of track, to the same account to which the new rails are charged. Of course, the old rails then become as though they had been purchased for money; they are a part of the material on hand.

That the valuation here disclosed was not an exceptional one, we go back to the annual reports for the

years 1894, 1895 and 1896, and find that the invoice for those years was as follows:

1894—6,236 tons, $95,495.04 or $15.31 per ton. (Page 713).

1895—8,957 tons, $105,404.02 or $11.76 per ton. (Page 714).

1896—11,248 tons, $152,008.98 or $13.51 per ton. (Page 714).

The average valuation for the four years would be $12.85 per ton.

This would include the freight or cost of distribution, as Mr. Winnie testifies that they are quite well distributed over the system at the time of the valuation,

We have made some inquiry in other directions and we lear from Mr. Cronk, clerk of the superintendent of the Dakota division of the Chicago & Northwestern Railway Company, that that company is using relayer steel in Dakota, and he testifies as follows. (Pages 913-914):

Q.—Can you state about the amount of iron and steel that has been used to replace and repair in South Dakota up to the present time?

A.—This would have to be from memory. I did not take any data. I can say this, that the line from Tracy to the state line, which is about forty-six miles, has since the beginning, since the line was built, been relaid and the steel that was taken up on this line, this forty-six

miles, has been used in repairs and replacement of the balance of the line, and also in construction of side-tracks. In addition to that, we have received some, I could not say how much, from other divisions.

Q.—Not a great deal?

A.—I could not say it was.

Q.—The rails for replacement and repairs have been supplied largely by this forty-six miles that was relaid?

A—Yes, sir; to a considerable extent. We received rails from the east to relay this part and took the rails from this line, from Tracy to Elkton, to lay on the balance. In addition, we have received several shipments of rails outside of that, but very little.

Q.—Do you know the price at which the Dakota divisions are charged by the Chicago & Northwestern Railway for these relayers?

A.—The price varies. Each year it is a different price. It runs anywhere from thirteen to a little over thirty dollars a thousand.

Q. —A ton you mean?

A.—Yes, sir; gross ton.

Q.—What was it the current year?

Mr. Kittredge: Objected to as incompetent and immaterial.

A.—This, you understand, is the price for second quality steel—thirteen dollars a ton.

Q.—When you say "second quality," you mean steel that has been used heretofore, I take it?

A.—Yes, sir.

It will be noted that the rails referred to by Mr. Cronk are being taken up between Tracy and Elkton on the Dakota division and taken to the James River line north of Huron on the same Dakota division, so that the valuation is the value delivered on the Dakota division.

It is difficult to name an exact figure as the value of this steel varies from year to year, but it would seem to be fair to take an average of the valuation fixed by the officers of the complainant for the four years as the present fair value. This we found to be $12.85 per ton, or within fifteen cents of the valuation fixed by the Chicago & Northwestern company.

The issue is, what is the present fair value. What the rails may have cost eighteen years ago can have little weight and certainly where the rails purchased eighteen years ago have disappeared and are not now in the track it would seem that the price paid at that time can have no influence whatever.

Complainant has not offered any testimony whatever directly tending to show the present fair value of the rails in the track. The only testimony on this subject has been offered by the defendants, either direct or by cross-examination.

Our contention is, that this rail item should be fig-

ured according to the fact, that is to say, 96,879 tons of old steel rails at $12.85 per ton, $1,244,895.15.

This means a reduction of this item of $3,725,731.85, or $3,383.95 per mile of road.

In addition to the foregoing, there must be an allowance made for the rails in side-tracks. It is undisputed that the rails for side-tracks are not as valuable as those in main track. They are usually old rails and in most cases they are iron rails.

It will be fair to allow eighty tons to the mile. There are 86.15 miles of side-track. This will make 6,892 tons, and, allowing $12.85 per ton, amounts to $78,562.00.

We have been more than fair in estimating the quantity of rails, because we have assumed that the entire mileage in the state was laid with 60-lb. relayer steel. This is not the fact, as we find by the testimony of Maurice Corinell, a section foreman on complainant's line in South Dakota, that the relayer steel on his work is 56-lb. (page 742), and doubtless more of the 56-lb. could be found in the state. He also testifies that these relayers are dated 1875. Prof. Whitney found relayers dated 1875, 1880 and 1883. (Pages 843-4-5-6).

The railway companies do not keep rails stacked up. These rails have been in use somewhere during these years, and hence we must conclude that Mr. Earling is mistaken when he said this relayer steel had been in

use seven or eight years, as it is evident that it has been in use from fifteen to twenty-three years.

Cross-Ties.

3,562,000 cross-ties means 3,000 ties to the mile of road. The rails are 10 yards long and there are 176 rail lengths to the mile. This estimate is based on 17 ties to the rail.

Mr. La Follette, one of the defendants, testifies that he has counted ties at various points in the state and his testimony is as follows, (page 815):

"I have counted the ties under the rails at perhaps twelve or fifteen stations, or near them, and I found the ties varied from fourteen, fifteen, sixteen and seventeen, and occasionally as low as thirteen, so that I should say that the average rail, I think, would have fifteen or fifteen and one-half ties to the rail."

Prof. Whitney testifies, (page 840):

Q.—Have you investigated the subject of the number of cross-ties to the mile?

A.—Yes, sir.

Q.—How have you obtained your data for that computation?

A.—The result of the inspection I made of the line; and I differ in the total amount of cross-ties on the South Dakota lines from this quantity, 3,562,000, which is based on 3,000 ties to the mile. My observation indicates pretty clearly that about 2,816 ties—sixteen ties

to the thirty-foot rail—is the condition of the track.

It will be noticed that the complainant has not produced any direct testimony on this subject, but rests the issue on Mr. Whittemore's estimate.

Against this estimate we have the positive testimony of witnesses who are testifying from actual count, and the Court by looking at Exhibit 50, page 674, can count the ties under two rail lengths and find fifteen ties to the rail.

Taking Prof. Whitney's estimate of 2,816 ties to the mile, we find that the total (including side-tracks) does not exceed 3,342,592, or 219,408 less than Mr. Whittemore's estimate.

The Pattersonville extension account covers 246 miles of road. On the basis of sixteen ties to the rail it would require 692,736 ties, (page 841), and we find that the amount charged in that account for ties was $203,358.34. (Page 760).

Mr. Whittemore says that the ties were worth 30 cents each at the time the road was constructed. At 30 cents each, $203,358.34 would pay for 677,861 ties, or a little less than the number which sixteen ties to the rail would make.

This is a strong corroboration of our claim that the ties do not exceed sixteen to the rail.

Mr. Whittemore estimates the ties at 30 cents each, and later on makes an additional charge for the freight

on the ties. Railroad ties have a market value, and it would have been quite an easy matter for complainant to have proven the market value of cedar ties such as are in use on the Dakota lines.

We find by the invoice contained in the annual report for 1897 that 843,298 ties are valued at $233,677.15, or a fraction over 27 cents each. This lot of ties undoubtedly contains oak, cedar and hemlock, and it would hardly represent the value of cedar ties as they are much cheaper than oak. Mr. Cronk testifies that the C. & N. W. charge the Dakota division 21 cents for cedar ties. (Page 911).

Why is it that the complainant withholds its records and fails to show what it pays for these ties and how much it charges the Dakota lines for ties?

Undoubtedly the C. & N. W. charges the Dakota divisions the actual amount expended, 21 cents per tie.

This may not be the most satisfactory proof of the value of ties, but it is the best to be found in the record of this case. Mr. Whittemore's estimate is based upon prices prevailing eighteen years ago when the lines were constructed. Mr. Earling testifies that ties will not last more than ten years, so on that theory the original ties have entirely disappeared. The freight on the ties is included in the item of freight on track material, and hence we are now dealing with the value exclusive of freight.

Allowing complainant the number of ties actually found in the track, 3,342,592, and allowing the value as fixed by the C. & N. W. Ry., 21 cents, we find that the tie item should read: "3,342,592 cross-ties @ 21 cents, $701,944.32."

Track Laying.

The next item of importance is the item, 1,187.21 miles track laid and surfaced @ $450, $534,244.00.

In regard to this item, Mr. Whittemore testifies, (page 402):

"That is estimated as being a proper expense for that work at that time, and even it would be to-day."

Q.--On what basis did you estimate it; how did you reach that sum as the cost of laying and surfacing the road?

A.--I combined two items there, the cost of laying and the cost of surfacing, and it was about the price paid for a similar class of work when it was constructed, and it represents, as I believe, the actual cost of doing such work.

On cross-examination the witness was asked to separate these items, and his testimony is as follows, (pages 416-417):

Q.—Let me ask you if it is not a fact that at the present time in the track work, this labor of surfacing and track laying is usually figured at $300 a mile?

A.—It was at that time, but it does not comprise what I have comprised in my estimate. I wish to explain the manner of track laying. In the first place, suppose you have a contractor doing this work at say $300 a mile, or whatever it is; you run the material out to him, which I have put in here at $140 a mile, the cost of moving the material. He will get that and perhaps drop the surfacing, I do not know of any track laying or surfacing at $300 a mile. He leaves it and goes off, he is moving ahead, and the company has to keep that track intact, in order to keep materials moving ahead. If he does the surfacing, he shovels from the side of the track, shovels the earth from the side of the track and by that means leaves sort of a slack shoulder there. He has done this part of the work, but the track in the rear of him has to be maintained for the operation in moving materials ahead. Immediately behind the contractor, after he has left his work, the company has to put on a gang of men, who take the place of section men, put them on and keep them on there. That is paid for and may cost $100 a mile or more, and shoving material ahead $140. That charge I state in here is intended to be a conservative estimate to cover all these expenses.

Q.—That, you say, you figure at $140 a mile?

A.—No, sir.

Q.—That was for the delivery of material?

A.—Shoving material ahead from our store.

Q.—But what proportion of the $450 would that constitute?

A.—What would it constitute?

Q.—This work that you spoke of after the track laying?

A.—Well, it depends altogether on the length of the line that you are operating from your headquarters. It may be—I should say average $75 and perhaps $100 a mile. It is a matter of judgment, if you please.

So that Mr. Whittemore has figured the track laying at from $350 to $375 per mile, and $75 to $100 for surfacing.

By reference to the Pattersonville extension account on pages 762 and 763 we find the contractor was paid $240 a mile between Pattersonville and Mitchell, S. D., and $240 a mile between Marion Junction and Running Water, and $210 a mile between Mitchell and the Missouri River (Chamberlain).

It is difficult to harmonize Mr. Whittemore's statement, that he has figured on the basis of prices paid at the time the road was constructed, with the facts disclosed by this Pattersonville extension account. According to this account, $240 was the highest price paid and this included the surfacing.

Prof. N. O. Whitney was called by the defendants as an expert witness on these matters. He is at present the

professor of civil and railway engineering at the University of Wisconsin. His testimony, showing his qualifications, is as follows, (page 838):

Q.—Just give a short statement in your own language of the work that you have done from that time to the present in your profession?

A.—I was about six months in the chief engineer's office as draftsman and about a year on the construction on the Pittsburg, Virginia & Charleston branch of the Pennsylvania Railway upon the Monongahela river; then locating engineer on the Mexican National Railway in Mexico for nearly a year and a half; surveyed and located 300 miles of the Mexican National Railway; then for about four years locating engineer and resident engineer on construction on the South Pennsylvania Railway in Pennsylvania, where I located some forty miles of that line; then for about five years as assistant to the chief engineer of the Pennsylvania company, with headquarters at Chicago, during which time I located and built three small lines of the Pennsylvania system in the neighborhood of Chicago—the South Chicago & Southern Railway, the Calumet river line and the State Line & Indiana City Railway; then from the fall of 1891 till the present time I have held the chair of railroad engineering in the University of Wisconsin.

And on page 856 he testifies that he is a member of

the American Society of Engineers, (has since been elected vice-president), the Western Society of Engineers, the Railway Club of Chicago, and the society for the promotion of engineering education. He appears in this case without interest, prejudice or bias, and with but a single controling influence—his professional reputation.

On page 840 he testifies in regard to this item of laying track:

Q.—I call your attention to the item of $450 a mile for track laid and surfacing, and ask if you are familiar with the cost of such work ordinarily?

A.—Yes, sir.

Q.—I will ask you what in your opinion is a fair value to place on that service or labor?

A.—The estimate which I have made for that item places the cost at $240 per mile, instead of $450, based on the cost of that work in the Pattersonville extension, as submitted by the company.

Q.—You have examined this statement of the cost of constructing this Pattersonville extension, have you?

A.—Yes, sir.

Q.—And you found from your examination that the charge has been $240 per mile east of Mitchell?

A.—Yes, sir. Portions were put down at $240 per mile and portions at $210. I took the $240 for track laying and surfacing.

Q.—And from your knowledge and experience in railway work, would you say that $240 was a reasonable allowance for that work?

A.—Yes, sir.

And on cross-examination, he testifies, (page 864):

Q.—You say the contract price in there is $240?

A.—$210 and $240. There are two separate contracts.

Q.—What does that service include?

A.—This work I have described.

Q.—So that includes the surfacing?

A.—Yes, sir.

Q.—Are you sure about that?

A.—Yes, sir; it is mentioned.

If we estimate this item at the highest price actually paid, the item would read: "1,187.21 miles track laid and surfaced @ $240, $284,930.40."

Track Ballast.

There is no evidence that 267 miles of the track or any other portion of it is ballasted.

It would have been an easy matter for the general road master to have given us the number of miles ballasted and a description of the ballast, so that the item could be investigated. As it now stands the item must be rejected. Especially so, when we consider the testimony of Roadmaster Nelson that the ballast has not been maintained.

His testimony on that point is as follows, (page 734):

"Well, it was ballasted with gravel about ten or eleven years ago."

Q.—Has that been maintained?

A.—No, sir; it is worn out now.

Highway Crossings.

Mr. Whittemore estimates 1,200 crossings and allows 240 feet to the crossing.

He says with reference to the number of crossings, "That is in a degree estimated." (Page 418).

This number would place crossings at every point where the line of road is intersected by a section line.

Theoretically every section line is a highway, but as a matter of fact we know that in a sparsely settled prairie country every section line is not used as a public highway, and it is doubtful if over one-half are provided with crossings.

There simply isn't any evidence before the Court as to the actual number of these crossings, and strictly speaking we might object to the item, but we are willing to concede 500 crossings, because Mr. Whittemore on page 404 testifies as follows:

Q.—1,000 cattle guards, estimated at $10 for each cattle guard, $10,000; is that a correct item?

A.—I believe that is a correct estimate. We have 500 highway crossings and I put that in as certainly that much.

And on page 418:

Q.—1,000 cattle guards, is that an actual number or estimated number?

A.—That is an estimated number. To ascertain the number of cattle guards multiply crossings by two.

On page 618 Mr. Earling gives the only description of these crossings to be found in the record:

Q.—The ordinary highway crossing in South Dakota outside of the cities and towns is constructed by placing four planks, one upon each side of the two rails, and spiked down to the ties, is it not?

A.—The less important crossings are so constructed. The more important ones are planked clear across, that is, from rail to rail, inside, and there is usually one plank on the outside of each rail.

Q.—There are no extra timbers placed in the track aside from the planking to make the crossing?

A.—Nothing more than is required to furr up on the ties so as to bring the planks on a level with the rails.

Mr. Whittemore's estimate amounts to $4.80 per crossing, while Mr. Earling on page 301 estimates 200 crossings at $624, or $3.12 per crossing. Allowing 500 crossings at $3.12 each, the item would amount to $1,560.00.

Cattle Guards.

Mr. Whittemore admits that the number is not actual but estimated. By actual count the defendants

found that there really were but 221 cattle guards in the state.

Roadmaster Nelson says there is but one between Milbank and Aberdeen. (Pages 819, 820-893-731).

Accepting Mr. Whittemore's valuation, the item should read: "221 cattle guards at $10 each, $2,210."

Some of these items are not of sufficient importance, so far as this case is concerned, to justify the consideration we have given them, and we have only done so in order to show that the estimate has been carelessly made and is generally unreliable. The testimony of Prof. Whitney, on cross-examination, is interesting on this feature of Mr. Whittemore's estimate. On page 865 he testifies:

Q.—How about getting these supplies up to the front from the depot?

A.—In what respect?

Q.—Is that included in the estimate?

A.—No.

Q.—Now, what is the expense to the railroad company of doing that work?

A.—I don't know—Mr. Whittemore adds $140 a mile for that work.

Q.—Well, what do you say about that?

A.—I have already stated about that I believe.

Q.—You think that that is fair, do you?

A.—I said I had no means of checking that because

the center of supply was unknown to me, and therefore I could not check it; it seems high. I think it has been stimulated as a good many items there, probably, have been, but cannot be shown.

Q.—You don't dispute that item?

A.—I have no means of doing it—no.

Q.—So, then, to the $240 you add $140 per mile, do you?

A.—I add $140?

Q.—Isn't it right to add the $140?

A.—No.

Q.—Didn't Mr. Whittemore, in his estimate of $450 per mile, include the cost?

A.—No.

Q.—Are you sure about that?

A.—He has two separate items there, one is for that and one is for track laying.

Q.—Now, where is that?

A.—Page 423 of the record, 1,187.21 miles of track laid and surfaced at $450; then three lines below is 1,101 miles of material which was moved to the front from the nearest point of distribution at a cost of $140. This is the item I have no means of checking, and I so stated in the direct examination. I was going to say I think that item is large, but I have no figures to check it by.

Q.—Then you think Mr Whittemore is incorrect in his estimate of these two items, do you?

A.—Which two?

Q.—The two items of which we are talking?

A.—I think so; yes. The first is incorrect evidently, by the evidence I have submitted—the $140 I think is padded, but I have no means of showing it.

As a further illustration of the recklessness with which this estimate has been thrown together, Mr. Whittemore estimates 505 miles of right of way fenced at $280 per mile, $141,400.00. On this he testifies on page 404:

Q.—505 miles of right of way fenced, $280 per mile, $141,400?

A.—I get that 500 miles of right of way fenced from the general superintendent informing me what road is not fenced, and I take the price of the fencing—

And again on page 418:

Q.—That is your charge for two cattle guards for each mile of track on the right of way which is fenced?

A.—That is it, I think.

And yet we find by actual count that there are only 221 cattle guards in the state. On this basis there would only be 110.5 miles of right of way fenced, and the item would only amount to $30,940.00.

Freight and Transportation of Men and Materials.

These five items amount to $2,532,035.00, or $2,133.14 per mile of road (1,187 miles).

On pages 419-420 Mr. Whittemore gives an explanation of these items, as follows:

Q.—The freight on track material was estimated from Chicago, was it?

A.—I will show you how we arrive at that. Rails, splices, spike is hauled from Chicago to Mitchell, 655 miles; we call it 650 miles; 106,300 tons of rails hauled 650 miles at ¾ of a cent per ton per mile amounts to $518,212.50; 8,360 tons of splices hauled 650 miles at ¾ of a cent per ton per mile, $40,755.00; 4,155 tons spike hauled 650 miles at the same rate, $20,255.63; 391,800 tons cross-ties hauled from Milwaukee to Mitchell, 570 miles, called 600 miles, 391,800 tons of cross-ties averaging 220 pounds per tie hauled 600 miles at ¾ of a cent per ton per mile, $1,763,100.00; total estimated freight on track material, $2,342,323.13. I don't know whether those are the figures in this estimate or not; the cents I have left off.

Q.—And from what point was the freight on bridge and culvert material estimated?

A.—I took the timber and piles, assumed haul from Portage in Central Wisconsin to Mitchell, 529 miles, and called that 500 miles. Truss bridge material assumed hauled from Milwaukee to Mitchell, 570 miles,

called 600 miles; all this material did not come from this place, but I assumed what I thought was an aggregate haul or an average haul rather for each material. There is 16,500 tons in trestle bridges and culverts hauled 500 miles at ¾ of a cent per ton per mile, $61,875. 700 tons of material in truss bridges hauled 600 miles at ¾ of a cent per ton per mile, $3,150. 11,690 tons of piles, estimated at fifty pounds per lineal foot, hauled 500 miles at ¾ of a cent per ton per mile, $43,837.50; making a total estimated amount of freight on bridge material, $108,862.50.

Q.—The freight included in your account amounts to very close to $2,000 per mile?

A.—Yes, sir.

Q.—You say the ties are estimated on the weight of about 220 pounds each?

A.—Yes, sir.

We have shown that there are only 103,771 tons of rails. We here find that Mr. Whittemore has figured 220 pounds per tie on his estimale of 3,562,000 ties. The actual number is 3,342,592. On this basis the freight amounts to 49.5 cents per tie. Evidently Mr. Whittemore is mistaken in his estimate, as we find that the freight on ties for the Pattersonville extension amounts to $193,222.07 (page 760), on the basis of one cent per ton per mile. Reduced to the ¾ cent per ton per mile (Whittemore's rate), it would amount to $144,-

916.55. This sum amounts to 20.9 cents per tie on 692,736 ties. (Page 841-842).

Mr. Earling, in his estimates, testifies that the freight on ties to Dakota amounts to about 20 to 22 cents per tie. (Page 298).

Mr. Whittemore also charges $66,000 for transportation of men to the work. The only testimony to support this item is the following testimony of Mr. Whittemore, (page 841-842):

"I estimate that we, during the six or seven years that that work was going on, transported to South Dakota about six men to the mile. That would make 6,600, and that these men were recruited and sent an average distance, that is to say, from Chicago to Mitchell, 650 miles; Milwaukee to Mitchell, 570 miles; Minneapolis to Mitchell, 415 miles; making the average distance about 500 miles, and at 2 cents a mile it would make $10 apiece, the cost of transporting these men.

Q.—That would not include the transportation of the men east again?

A.—No, sir.

Q.—That would just simply take them to their work?

A.—It may include those same men two or three times over. It only gives less than 1,000 passes a year, you see.

There is no evidence that complainant ever transported any laborers, or contractors' tools and teams to

Dakota free of charge. It does appear that the grading and track laying was done by contractors, but it does not appear that complainant was under obligation to furnish transportation.

Some of the men who worked on these roads may have rode to Dakota on passes, but no such charge appears in the Pattersonville extension account, and it appears that the company has no record of the transaction. (Page 419). So that this charge is simply a guess and should be rejected.

From the best information to be obtained from the record in this case these freight items should not exceed the following estimate:

103,771 tons rails
8,360 " splices
4,155 " spikes

116,286 tons, 650 miles at ¾c	$566,894 25
3,342,592 ties, at 20.9c	698,601 72
Bridge material	108,862 50
	$1,374,358 47

This amounts to about $1,158.00 per mile. The total freight charge of the Pattersonville extension was $398,492.54. (Page 760). This amounts to a little over $1,600.00 per mile. Reduce this from the 1 cent per mile rate to Mr. Whittemore's rate of ¾ cent per mile and it amonnts to $1,200.00 per mile. (Page 841).

This proves our estimate to be very nearly correct.

In making this estimate we have used the rate (¾c T. M.) used by Mr. Whittemore, for the sake of uniformity and comparison. This is equal to a charge of $4.875 per ton from Chicago to Mitchell, S. D.

Mr. Earling, in his estimate, figures freight at six-tenths of a cent per ton per mile. This would amount to $3.90 a ton from Chicago to Mitchell.

If we use Mr. Earling's rate, it reduces the freight charge just 20 per cent., and it would then amount to $1,099,487.00.

Railroad material such as we have been considering is a very low class of freight and ought to be transported as cheaply as any freight that is hauled. In the western classification it is classed as fifth class. This class is the lowest in the classification and is the same as class "E" on Exhibit 68, page 801.

Ehibit 68 is the maximum tariff governing local freight, and the rate on class "E" for 650 miles would be 27 cents per hundred pounds, or $5.40 a ton.

This would be the maximum rate measured by the highest rate sheet in existence on complainant's railway system. We find that complainant's regular rate on coal from Chicago to Mitchell is $3.35 per ton. (Page 810).

It is difficult to see why complainant should insist upon a greater freight charge for the purposes of this

case than it does for hauling hard coal, and we contend that to allow this item on the basis of Mr. Earling's estimate, $3.90 per ton, is certainly fair.

Buildings, Etc.

The next item of importance is the one relating to the cost of buildings, etc., $940,606,00.

Mr. Whittemore has taken these figures from an estimate made by Mr Bates, and we turn to the testimony of Mr. Bates for an analysis of the item.

Mr. Bates testifies that he occupies the position of engineer of bridges and buildings. He testifies that he prepared Exhibits 26 and 27 (pages 480 and 486), as follows, (page 456):

Q.—How did you arrive at the statement of the cost of the buildings and structures in South Dakota, which you furnished Mr. Whittemore for his testimony?

A.—I went over that in detail, with my assistant superintendent, who was formerly chief carpenter of the Southern Minnesota division, our architect who makes the plans and was supposed to be familiar with the cost of these structures, the chief clerk and his assistant, who kept the record of costs, and we placed the cost on each separate item of building.

On cross-examination, he admits that he has no personal knowledge of the buildings in South Dakota. His examination on this point was as follows, (page 460):

Q.—I notice a uniform charge running through this statement of $75 per station for out-houses?

A.—Yes; I took that as a unit for station out-houses and put them in at $75 each.

Q.—You did that without any definite knowledge of this, of exactly what they did cost?

A.—I know what our station out-houses cost now, and I could give a pretty close guess as to the cost of an out-house when we build them as we do now; when we build them in our shops and ship them out. There is a great deal of uncertainty as to the cost of an out-house. It depends upon the cost of the house itself and the size of the hole you set it over, and that of course would cost something.

Q.—Do you know, as a matter of fact, the dimensions of the out-houses in South Dakota?

A.—No, I do not.

Q.—So this is not based upon an actual estimate of the houses actually on the line in South Dakota?

A.—I do know that the out-houses that were commonly built at the time I came here were more expensive than those that we now build. I feel sure I was within the inside figure when I took the item of $75 for an out-house erected and in place.

Q.—But the estimate of $75 is not based upon actual knowledge upon your part, as to the dimensions of those out-houses?

A.—No, sir.

Q.—Is it not?

A.—No, sir; it is not.

On pages 462-463 the following:

Q.—This station for which you have produced plans and specifications, is what you call a standard station, is it?

A.—Yes; and that corresponds to the estimate of $2,500 given in those figures there, being the most expensive of stations at other than junction points.

Q.—What is the dimensions of this station?

A.—Twenty-four feet wide and seventy feet long.

Q.—And does it cost $2,500 to construct such a station at this time?

A.—Yes, sir; as near as I can estimate it, $2,500; I know of such stations having been built for $2,500 and even for more.

Q.—I will ask you if you ever made an estimate from the plans and specifications of this station within the last three months, applying the present market value of material?

A.—No.

Q.—You have not?

A.—No.

Q.—How long since you made such an estimate?

A.—I do not remember; it has been a good while since we have built such a station as that, in fact, I do not

recall when we have built any on that plan. Not since the Kansas City line was completed.

Q.—It is possible, is it not, that you have never made an estimate upon that plan?

A.—Not a detailed estimate figuring the cost prices of lumber, material, nails, and so forth.

Q.—You were not in charge of the construction of buildings at the time of the construction of these lines in South Dakota, were you?

A.—No, sir.

Q.—You have no personal knowledge of what those buildings cost at that time?

A.—No; with one exception; I noticed, in looking up the records, that the contractor was allowed $2,500 for one of those stations that he did not build.

Q.—That is, there was $2,500 deducted from his pay for one station that he did not build?

A.—Yes, sir.

Q.—I understand you to say that your relation with the company began in 1888?

A.—Yes, sir.

Q.—At a time after all these lines in South Dakota were constructed?

A.—Yes, sir.

And on page 467:

Q.—Do you know what the present cost of a twenty-foot Eclipse mill is?

A.—I do not, we have not been using them recently.

Q.—Neither do you know what the original cost of the Eclipse mill was of your own knowledge?

A.—Well, no; but I looked it up and found out what it was.

Q.—Where did you look it up?

A.—We could find that; we have old accounts which would show. My chief clerk would look up a thing of that sort and I would scarcely know where he got it.

From the foregoing it will be seen that Mr. Bates has made an estimate of the cost of the Dakota buildings without knowing very much about it.

We will now examine the estimate in detail:

The following is a summary of the items contained in Exhibits 26 and 27:

74 Standard Stations, @ $2,500		$185,000
32 Station Houses, @ $150 to $2,250		30,950
13 Engine Houses, etc		168,050
28 Engine Coal Stations		64,000
Water Stations—		
Buildings, machinery, etc	$35,612	
45 wells	23,020	
55 tanks, @ $1,500	82,500	
46 wind-mills, @ $650	29,900	171,032
Station Platforms		36,305
41 Coal and Oil Houses, @ $100		4,100
98 Out-Houses, @ $75		7,350
Stock Yards		70,630
125 Tool Houses, @ $65		8,125
32 Section Dwellings		30,525
31 Ice and Cold Storage Houses		16,995

16 Turntables		31,600
8 Cinder Pits		2,800
4 Track Scales, @ $1,000		4,000
Passenger Station at Sioux Falls	$13,000	
" " Aberdeen	6,000	
" " Yankton	3,750	
" " Madison	3,300	
" " Running Water	2,700	
" " Mitchell	2,600	31,350
Freight Houses, Sioux Falls	$9,000	
" " Aberdeen	2,200	
" " Mitchell	1,500	
" " Milbank	900	
" " Chamberlain	5,400	19,000
Sundry items to balance		58,794
		$940,606

74 Standard Stations.

The first item is 74 standard stations. Exhibit 43 Page 667 is a view of one of the standard station houses alleged to have cost $2500.

It will be remembered that Mr. Bates was the only witness called by complainant on the cost of these buildings and that he admits that he never made an actual estimate of the cost to construct one of these standard stations. (Pages 462–3.)

Mr. Bates furnished us with a set of the plans of a standard station which we placed in the hands of a competent contractor and builder. Mr. R. J. Booth was called as a witness for defendants and having testified as to his qualifications as a mechanic and builder, he

says that he examined some of the stations alleged to be standard stations and that from his examination of the buildings and from the plans placed in his hands he prepared an estimate of the cost to construct such a building on the basis of the cost of materials in South Dakota. Exhibit 51, page 685, is such estimate in detail. It will be noticed that he has estimated the actual cost at $1,461.52, and adding 10 per cent. for contractor's margin it makes a total of $1,601.52.

He further testifies, (page 687):

Q.—In making your estimate upon these standard depots, did you make the estimate with reference to the construction of a single building, or did you make it with reference to the construction of a series of such buildings?

A.—I made it with referenee to the construction of one building. If I had a contract on a number, I could make a lower estimate.

Q.—And if you had a contract for the construction of seventy-two of such buildings at the several stations of the complainant railway company in South Dakota, you think you could construct them for less than this estimate?

A.—Yes, sir.

Q.—And how much less, do you think?

A.—I think about eight per cent. less.

This is direct and positive testimony. Complainant

has made no effort whatever to dispute this testimony, not even to the extent of recalling Mr. Bates.

On this basis 74 standard stations would cost $118,-512.48. Mr. Booth says if he had a contract to construct 74 such buildings he could do it for eight per cent. less than his estimate for a single building. This would reduce the cost to $109,031.49.

32 Station Houses.

The next item, 32 station houses, costing from $150 to $2250.

We of course could not make detailed estimates of all the buildings. It was the duty of complainant to show the value of these buildings by competent testimony, and we only go far enough in this direction to show the court the fact that Mr. Bates' figures are wide of the mark and unreliable.

Of these 32 station houses we have made estimates of two of them, one at Harrisburg and one at Vilas.

The one at Harrisburg is estimated by Mr. Bates at $1,050, (page 492). Mr. Booth estimates this station house at $561.92, (page 679, Exhibit 39).

Exhibit 50, page 674, is a view of the station house at Vilas. Its cost is stated by Mr. Bates at $1800, (page 513), while Mr. Booth places its cost at $945, (Exhibit 40, page 680).

13 Engine Houses.

We have made estimates on four of these engine houses.

The one at Sioux Falls is shown in Exhibit 49, page 673. Its cost is stated by Mr. Bates at $5,500, (page 493). Mr. Booth's estimate is $3,153.

The cost of the one at Mitchell is stated by Mr. Bates at $28,000, (page 501). Mr. Booth's estimate is $16,187.

The cost of the one at Woonsocket is stated by Mr. Bates at $4,500, (page 503). Mr. Booth's estimate is $2,373, (page 678).

The cost of the one at Egan is stated by Mr. Bates at $6,000. (Page 512). Mr. Booth's estimate is $2,505.00. (Page 677).

28 Engine Coal Stations.

We have estimates on four of the stations and the comparison is as follows:

	BATES.	BOOTH.
Egan	$2,700	$1,784
Woonsocket	1,800	1,257
Sioux Falls	2,600	1,322
Mitchell	3,000	1,896
	$10,100	$6,259

Water Stations.

It will be noticed that there are 55 water tanks, the cost of which is stated by Mr. Bates at $1,500 each. Mr. Bates testifies concerning these tanks, on cross-examination, as follows, (page 466):

Q.—What is the dimensions of the water tanks?

A.—Our standard water tank is 16x24; that is, the staves are sixteen feet long and the tank is twenty-four feet in diameter.

Q.—And what is the capacity?

A.—50,000 gallons.

Q.—These water tanks were constructed and placed upon the lines in South Dakota prior to the time you took charge of this department, were they not?

A.—Yes; with possibly a few exceptions.

Q.—And you do not know of your own knowledge the cost of those tanks?

A.—Not of those particular tanks; no, sir.

And page 468:

Q.—Do you know what the present cost of these water tanks is?

A.—We have a list of material and labor at $1,240 each; I put them in my list at $1,500.

Q.—That is an estimate on your part?

A.—Yes, sir.

Q.—What height of stand is used, about?

A.—About ten feet posts; the height of those tanks as a rule is determined by the spout to deliver the water into the tenders of the engines.

Q.—You think about a ten-foot stand?

A.—Yes, sir.

Q.—Do you know what the cost of these stands are estimated at?

A.—No.

Q.—Are you familiar with the tanks constructed by the Fairbanks-Morse company?

A.—Not especially, because we build our own tanks. Since I have been here we have built all of our own tanks.

Q.—I show you a catalogue and ask you to state the price of a tank as indicated there, 16x24, with rivited hoops?

A.—Price, with riveted hoops, $500; *you understand there is a large discount on this*, but at the same time it is proper to consider that the frost proofing adds very largely and I do not think that is counted there.

Q.—The frost proofing for a twenty-four foot diameter tank is how much, as shown by this catalogue?

A.—That is a frost proof roof. It would seem that the addition would be $190 on the list price additional for the frost proof roof. This (referring to cut showing boxing under tank) ought to be frost proof. That is very expensive work; I think with our standard frost proofing, there are four different thicknesses of boards with air spacing between each one of them, and that is not included, I believe.

It is hard to understand how Mr. Bates figures tanks at $1,500.00, when the list price is only $500, and that subject to a *large discount.*

Mr. Booth has made an estimate of the cost of these

tanks in place, and finds that he can construct them for $988.00.

Mr. Bates figures 46 wind-mills at $650 each.

Mr. Bates testifies concerning these mills (page 466), as follows:

Q.—What style of a wind-mill is in use?

A—Most of those mills out there are the Eclipse wind-mills.

Q.—What size?

A.—I think the twenty-foot mill is the most common.

Q.—They are uniform in size, are they?

A.—I think that there were some twenty-four foot mills, but I am not sure of that. We have had occasion to buy other sizes; in my time we usually bought the twenty-foot mill.

Q.—Do you know what the present cost of a twenty-foot Eclipse mill is?

A.—I do not, we have not been using them recently.

Q.—I show you a price list of Eclipse mills and ask you to examine it and ascertain what the present market price is of a twenty-foot Eclipse mill?

A.—I would have to go to the Eclipse people to find that; if there is a price list in here there would probably be a very *large deduction or discount.* You see they have a list price of $450; that does not include the tower; there is the cost of the tower and the erection and transportation that would be added to that.

Exhibit 46, page 670, is a view of a tank and mill. There must have been a large discount, as we find that the amount paid for wind-mills in the construction of the Pattersonville extension was $300. (Page 761).

Mr. Booth estimates these mills, including the tower, at $370.00.

We have estimates on four water stations and the comparison is as follows:

	BATES.	BOOTH.
Egan tank	$1,500	$988
" mill	650	370
" steam pump	700	365
" pump house	250	125
" well	250	140
Woonsocket tank	1,500	988
" mill	650	370
" well	750	750
Sioux Falls tank	1,500	988
" " mill	650	470
" " pump house	200	60
" " pipes and sewerage	250	250
Mitchell tank	1,500	988
" pump house	300	192
" pump comp.	500	500
" well	600	600
" piping	1,800	1,500
	$13,350	$9,644

41 Coal and Oil Houses

Forty-one coal and oil houses, the cost of which is stated by Mr. Bates at $100 each. Exhibit 45, page 669, is a view of one of these buildings.

They are estimated by Mr. Booth at $58 each.

Ninety-eight out-houses at $75 each. Exhibits 47 and 48, pages 671 and 672, are views of sample out-houses.

Mr. Booth estimates these at $32 and $21.

Stock Yards.

Mr. Bates testifies that he has estimated stock yards at 7 cents a square foot of enclosure. This is upon the theory that the yards are paved or planked, yet he does not know whether any of the yards in South Dakota are paved or planked. (Page 459).

The following is a comparison of the estimates made by Mr. Bates and Mr. Booth on some of the stock yards:

	BATES.	BOOTH.
Egan	$300	$167.00
Woonsocket	900	670.00
Harrisburg	375	149.25
Sioux Falls	150	90.00
Mitchell	1700	700.00
	$3,425	$1776.25

Tool Houses.

One hundred and twenty-five tool houses at $65, $8,125.50. Booth estimates these buildings at $40 each, making this item $5,000.

Exhibit 44, page 668, is a view of one of these tool houses.

We have no estimates on section dwellings.

Ice and Cold Storage Houses.

The following is a comparison of the estimates made by Mr. Bates and Mr. Booth:

	BATES.	BOOTH.
Egan	$400	$232.00
Woonsocket ice	300	177.00
" cold storage	960	None there
Sioux Falls	450	181.00
Mitchell ice	1,000	601.52
" cold storage	350	177.60
	$3,460	$1,369.12

Turn-Tables.

Mr. Bates has stated the cost of the iron tables at $3,000, and the wooden tables at $1,500 each.

The turn table at Mitchell is estimated at $3,000 by Mr. Bates. We find on page 28 of the annual report for 1894, that this table was reported to the stock holders as having cost $688.17, (page 713). Mr. Booth estimates it in place at $1,634.

The turn table at Sioux Falls is estimated at $1,500 by Mr. Bates. Mr. Booth estimates it at $894.

Mr. Bates in his estimates has figured the passenger station at Sioux Falls at $13,000.00 and the freight house at Sioux Falls at $9,000.00. The buildings were constructed in 1894 and are reported in the annual report for 1895, on page 25, as having cost $6,414.15 for the passenger station and $5,697.50 for the freight station.

Mr. Booth's estimate on these buildings was $7,191 for the passenger, and $4,714 for the freight station.

The round-house, or engine house, at Aberdeen, is estimated by Mr. Bates at $30,000. (Page 510).

It is reported in the report for 1888, on page 21, as having cost $6,484.21.

The turn-table at Milbank is estimated by Mr. Bates at $3,000 (page 524), and was reported in the annual report for 1892 as having cost $1,138.53. (Page 710).

The station house at Summit is estimated by Mr. Bates at $1,200 (page 519), and is reported in annual report for 1896 as having cost $975.78. (Page 714).

Mr. Bates testifies that they have a standard water tank, 16x24, holding 50,00 gallons; that he has a list of the labor and material for the construction of these tanks, showing their cost to be $1,240 each (page 468), yet we find from the annual report for 1897, page 33, that a water tank at Sanborn, Iowa, is reported as having cost $500. (Page 715).

This corresponds very closely to the list price of Fairbanks-Morse company of $500, subject to a large discount.

It is impossible to arrive at any satisfactory conclusion with reference to the value of complainant's buildings in South Dakota.

Every place where we have been able to apply any kind of a test, Mr. Bates' figures have been shown to be unreliable.

About the only way to get a fair figure on this item of buildings will be to make a comparison of the estimates made by Mr. Booth and Mr. Bates, so far as we can, and thus arrive at the per cent. of reduction and apply that per cent. to the whole item.

The following table shows the total estimates of Mr. Bates and Mr. Booth of all the property at the stations named:

	BATES.	BOOTH.
Sioux Falls	$38,555	$21,943.00
Mitchell	63,676	39,289.92
Egan	19,320	10,624.00
Woonsocket	14,675	8,761.00
Vilas	2,200	1,231.00
Harrisburg	1,635	837.23
Total	$140,061	$82,686.15

The reduction is $57,374.85 or 40 per cent.

It we apply this reduction to the whole of the item we have $940,606, less $376,242.40 (40 per cent.), leaving $564,363.60.

This is not satisfactory but is perhaps the best that can be done with the material at hand.

Returning again to Mr. Whittemore's estimate we find after the item, "Engineering, etc.," Mr. Whittemore drew a line and made his footing $14,246,505.

Then apparently as an after thought he adds $854,790 for interest, which, it will be noticed, is equal to one year's interest at 6 per cent. This is added upon the

assumption that the whole $14,246,505 of labor and material was non-productive for the full period of one year. It is an assumption not warranted by the facts, and does violence to the claim of good management.

The evidence clearly shows that railway companies do not buy track material such as rails, and store it away. There is too much money involved. It is purchased as needed and placed in the track. This entire 1101 miles of road was not idle until all was completed. A glance at this, (Exhibit 1, page 4), will show that this 1101 miles of road is not an entirety in the sense that no part of it was available for use until the entire system was completed. On the contrary it is apparent that any section or division of the road was available for traffic as soon as such section or division was completed. It is a fair assumption, nothing to the contrary appearing in the testimony, that the several lines were opened for traffic as soon as the rails were laid and that in any event the track material was not dormant to exceed thirty days.

Mr. Whittemore estimates track material as follows:

Rail	$4,970,627
Spikes	207,765
Splices	418,000
Ties	1,068,600
Switches	69,000
Crossings	2,000
Crossing plank	5,760
Cattle guards	10,000
	$6,751,752

Items which belong to or follow the track:

Track laying	$534,244
Ballast	133,500
Track material moved to the front.	154,140
Fence	141,400
Snow fence	67,200
Freight on track material	2,342,323
Total	$10,124,559

By this it will be seen that $10,124,559.00 of the $14,246,505.00 is money invested in the track, and to be very liberal we should not allow more than 60 days for getting this track in shape for trains over any given section or division of the road. To allow four months on the balance of the items would certainly be fair.

However, we do not want to figure this interest on the stimulated figures contained in Mr. Whittemore's estimate, but the interest should be figured on the fair cost of the road. On this basis we find that our estimate of the items constituting the $10,124,559.00 amounts to $4,372,419.08. Interest on this sum for 60 days at 6 per cent. amounts to $43,724.19; and that the balance of the items constituting Mr. Whittemore's $14,246,505.00 we estimate at $3,690,679.68, and interest on this sum for four months at the same rate amounts to $73,813.58, making the total interest item $117,537.77.

We now find that Mr. Whittemore draws another line and makes another footing, $15,125,877.00. Then comes another afterthought—for betterments, 5 per cent., $756,294.00.

Where has this betterment been placed?

Not on rails charged at $46.76 per ton that are only worth $12.85.

Not on ties charged at 30 cents that are only worth 21 cents, and 200 more to the mile than there are in the track.

Not on the ballast that has worn out and disappeared.

Not on the 1,000 cattle guards, when there are only 221 in the state.

Not on the $2,532,035 freight and transportation.

Not on the $940,606 of buildings that are figured at least 40 per cent. more than they cost.

And certainly not on the interest item of $854,790.

Our only answer is that this betterment exists only in the imagination of the witness.

Mr. Whittemore concludes his estimate with the modest item of $300 per mile for material on hand. By reference to page 34 of the annual report for 1897 we find that complainant had material on hand:

June 30, 1896	$1,846,511 36
June 30, 1897	1,911,287 76

This, of course, was for the entire system of 7,866.88 miles of road, and amounts to $244 per mile of road.

Why South Dakota lines, with few trains and light traffic, should be more than the average on the entire system is not explained.

From the best analysis of the testimony that we are able to make, we believe the following to be a fair state-

ment of the value of the items we have been considering:

Earth work	$1,886,207 00
Riprap	7,500 00
Bridge timbers in bridges	330,330 00
Piles in bridges	163,660 00
Truss bridges	35,495 00
Iron culverts	14,300 00
Relayer steel rails	1,333,441 36
Track spikes	207,765 00
Rail splices	418,000 00
Cross-ties	701,945 32
Switches	69,000 00
Railroad crossings	2,000 00
Track laying and surfacing	284,930 40
Right of way fence	30,940 00
Snow fence	67,200 00
Highway crossings	1,560 00
Cattle guards	2,210 00
Freight	1,099,487 00
Sign boards, etc.	11,626 00
Buildings, etc	564,363 60
Right of way	140,928 00
Telegraph	71,282 00
Engineering, etc	330,300 00
Material and supplies in store	289,628 00
	$8,063,098 60
Interest	117,537 77
	$8,180,636 37

Average cost per mile, main line, $7,430.

As a general proposition, can these figures be sustained?

We find from the annual report for 1894 (page 712), that the complainant constructed 4.24 miles of road from its then termini to the city of Sisseton, South Dakota, at a cost of $20,154.94, being an average cost of $4,753.52 per mile. Mr. Whittemore attempts to explain away these figures by the statement that the grading was done by the people along the route.

Admit that to be true and add to the figures given the average cost of grading as estimated by Mr. Whittemore, $1,589 per mile, and it only makes $6,342.50 per mile.

The total cost of constructing the Pattersonville Extension as shown by the account produced by complainant was $2,939,701.16 (page 760), and consisted of 247 miles of road. This is an average of $11,900 per mile. In this account rails were charged at various prices, but taking Mr. Whittemore's average $46.76 per ton and reducing it to $12.85, we have 247 miles, 88 tons to the mile, 23,736 tons; a reduction of $33.90 per ton amounts to $804,650.40. The freight amounted to $398,492.54 on the basis of one cent per ton per mile; reduce this to six-tenths, the basis used in our estimate, and the reduction amounts to $159,397. Deduct these two items from the whole cost, $2,939,701.16, and thus reduce the estimate to the basis of our estimate on rails and freight, and it leaves the cost at $1,975,653.76, or $7,998.59 per mile.

Another example is found in the annual report for 1895, (page 713), where it is reported that complainant constructed an extension from Minocqua, Wisconsin, to Star Lake, Wisconsin, a distance of 18.8 miles, at a cost of $183,623.73 (page 713). This makes $9,767 per mile. It is in evidence that this extension was built through a timber country where the right of way had to be cleared of timber. Also that the country was rough and hilly, requiring much more grading and bridges than the Dakota lines (pages 813–814).

Mr. Whittemore testifies to the building of second main track in Illinois and that it costs very much more per mile than the construction of the Dakota lines did per mile (page 430).

Q.—Are you able to state at this time the cost of that second track per mile?

A.—It will aggregate about $700,000. That is to say, for thirty-five miles. That which we have under way now will cost about $20,000 per mile. It is not a parallel to anything you have in South Dakota.

Q.—It is better constructed?

A.—No, sir; it is through a different country.

Q.—And the grading is different?

A.—Yes, sir.

Q.—And of course the ballast is altogether different?

A.—The ballast would be of a different character. It is not completed yet, but that is my estimate of the cost of the whole.

Q.—And of course you use a much heavier rail?

A.—Yes, sir; it is a heavier rail.

Q.—And the construction of this second track that you speak of would be more expensive than the construction of the road in South Dakota?

A.—Yes, sir.

We find from the annual reports that the complainant began building second track in 1890, (page 708), and we trace the record of such building through the annual reports and find (pages 708, 709, 710, 712, 715), that 242.91 miles of second main track were constructed at a cost of $1,781,979.41, making an average of $7,335 a mile.

It is true that second track does not require expenditures for right of way, depot, engine and shop buildings, but these items all told do not amount to $1,000 a mile in Dakota and would be more than offset by the heavier rail and more expensive ballast used on the new second tracks.

From these examples it will be seen that we are fully justified in our contention that the Dakota lines did not cost to exceed $7,430 a mile.

So far we have considered the value as measured by the cost of construction.

No testimony has been offered to show the amount of stock and bonds issued on account of the construction of the Dakota lines. The complainant has offered

evidence by which it appears that the Dakota lines were bonded for $19,365,247.16, but it does not appear that the proceeds of these bonds were used in the construction of the lines. It simply built the road, then mortgaged it, and one of the best proofs of the fact is the testimony of the auditor (pages 612-613), that the books o e company do not show any surplus funds being the difference between the cost of the road and the proceeds of the bonds. So that the amount for which the road was mortgaged has no relation to its cost and is no evidence of the cost or present value.

The evidence that the road is more valuable to-day than when constructed, consists solely in mere opinion, and is not based upon any fact, so that it is not to be taken seriously, and we shall spend no time in discussing it; yet it presents one of the many ludicrous contradictions of complainant in this case. It claims the property cost $15,000,000 and has been in operation from 15 to 18 years; that it has always operated the lines at a loss and yet the property is worth more to-day than when first constructed.

By the laws of the state of South Dakota, the complainant is required to file with the state auditor a sworn statement of all their property in the state subject to taxation. This statement is presented to state board of equalization and is the basis for the assessment of complainant's property. Exhibit 54 (page 747) is the statement filed by complainant with the state auditor for the

year 1897. While we are willing to concede a reasonable difference between an estimate of actual value and a valuation made for purpose of taxation, yet we cannot concede that any such difference as appears here can be overlooked or justified. The complainant claims its buildings, water and coal stations, etc., are worth $940,606 for the purposes of this case. In its sworn statement, filed with the auditor, it claims the same items to be worth only the sum of $135,864. In the tax statement the complainant declines to fix a valuation on its railway in South Dakota, saying: "The officers of this company will not assume the responsibility of stating under oath, the value of the property, inasmuch as it depends upon conditions and circumstances which are not fixed and capable of demonstration."

In the case at bar the officers of the company did not hesitate to assume the responsibility of stating under oath the value of its property of every kind and description, but it is not certain that the conditions and circumstances are such that the high valuation testified to by them are fixed and capable of demonstration.

This statement was filed with the state auditor in June, 1897, and in July following they instituted this action.

Standing in the door of a court of equity, they said to the state, we know not the value of our property, and then turning to the court in the next breath swear

positively to these enormous valuations as the basis for the relief sought in this action.

Complainant has offered no explanation whatever of the apparent contradiction between its own records and Mr. Whittemore's estimate. In fact, so far as this issue is concerned, it has rested its case entirely upon the testimony of Mr. Whittemore and Mr. Bates.

It was no duty of the defendant to show the value of this property, but it was the duty of complainant speaking through its witnesses, Mr. Whittemore and Mr. Bates, to a court of equity, to establish the value of its property to the satisfaction of the court. If complainant has failed so to do, then we are entitled to a dismissal of the bill.

Rolling Stock.

Complainant called Mr. Collins, the general superintendent, to prove the quantity of rolling stock on the South Dakota lines. It is a fact that very little of the rolling stock can be said to be located on any particular line or lines, as it moves about over the entire system of road as the traffic requires, so that at best we can only approximate the quantity of rolling stock on the lines in South Dakota. His testimony as to the quantity is as follows, (Pages 434 and 435):

Q.—How many locomotives are required and used for the South Dakota lines of the system?

A.—65.

Q.—How many freight cars are required and used in the conduct of the freight business of the South Dakota lines in South Dakota?

A.—3,500.

Q.—Now, you may state how those freight cars are divided or classified?

A.—Box cars, 3,100; stock cars, 200; flat cars, 175; refrigerator cars, 25.

Q.—How many passenger cars of all classes are there on the South Dakota lines?

A.—68.

Q.—Is not a certain proportion or number of the locomotives or cars of all kinds constantly in the shops for repairs?

A.—Yes, sir; and I have estimated the shop margin of locomotives and cars in my figures, or rather I have allowed for that.

Q.—How many mail and express cars in South Dakota on the South Dakota lines?

A.—13.

Q.—How many baggage, mail and express cars?

A.—1.

Q.—Passenger, mail and baggage?

A.—3.

Q.—How many passenger and baggage cars?

A.—6.

Q.—How many mail cars?

A.—3.

Q.—How many baggage cars?

A.—3.

Q.—How many coaches?

A.—38.

Q.—How many sleepers?

A.—1.

Q.—How many cabooses?

A.—40; these include the repair and shop margin based on what our records show to be the number required.

Q.—Have you any snow plows on the South Dakota lines; rotary snow plows?

A.—Yes, sir, we have one rotary plow.

Q.—What other cars have you there?

A.—Wrecker cars, tool cars and flanger cars; 15 altogether.

Q.—Have you any other equipment than that you have named on the South Dakota lines?

A.—We have a weed burner car, two pile drivers with two pile driver tenders.

Q.—Are you prepared to give the cost of this equipment about which you have specified?

A.—No, sir; I cannot.

Q.—Are your figures of the equipment based upon the present business in South Dakota?

A.—Upon the business we have been handling in South Dakota, say, during the past year.

Q.—Well, is the present equipment as great as you have had to use at some other stages of the business operation of the South Dakota lines?

A.—No, I think not. We formerly ran more passenger trains in South Dakota than we are now running. Business was much better and it required more service, and as the business fell off some reductions were made in the train service. We released some of the passenger train equipment.

Mr. Collins says that there are 65 locomotives, but he gives no description of them and is unable to do so. He testifies on cross-examination as follows, (page 435):

CROSS-EXAMINATION BY MR. NULL

Q.—Can you give a description of the sixty-five locomotives?

A.—No, sir; not from memory, and I may say that of course these same sixty-five locomotives do not remain within the geographical lines of South Dakota all the time.

And on page 439:

Q.—Are you able to tell the names of the manufacturers of these engines; that is, what engines they are?

A.—No, sir.

Q.—Whether Grant engines or what they may be?

A.—No; I cannot tell that without consulting the record; I think the record is incomplete.

He says there are 3,500 freight cars assigned to South Dakota. The method of arriving at this number is apparent from his testimony on cross-examination on pages 444-445:

Q.—Is it not a fact that the freight cars run over the entire system?

A.—Yes, sir.

Q.—There is no one freight car assigned to South Dakota, no particular car?

A.—That is, in freight service?

Q.—Yes?

A.—No, sir.

Q.—So the only way you can get at the number of freight cars is by some sort of computation of about what is necessary to handle the business?

A.—Yes, sir.

Q.—You have a car accountant?

A.—Yes, sir.

Q.—To whom the station agents report daily the cars and where they are?

A.—Yes, sir.

Q.—So that it would be possible to know the number of cars upon the track in South Dakota any day in the year?

A.—Yes, sir; but that would not indicate the number required.

Q.—No, but that would indicate the actual number there?

A.—That would indicate the number that were standing on tracks, but it wouldn't indicate the number

wanted. You must bear in mind, also, the number moving in trains in both directions; that could be arrived at, however.

Q.—Your car accountant is able to state, is not he, from reports made to him, the total number of cars within the boundaries of South Dakota, either standing on side-tracks or moving in trains?

A.—At a given time?

Q.—Yes?

A.—Yes, sir.

Q.—I wanted to know whether those 3,500 cars is arrived at by any averaging of the figures given by the car accountant.

A.—No, sir.

Q.—It had no relation to that?

A.—I took it for a period, at a time when the shipments were heaviest and at a time when we were unable to meet the calls for cars in South Dakota, took the average daily loading and the time, a less time than it really takes to make the round trip with the cars as they ordinarily go from point of shipment to destination and return, and used that as a basis to make those figures. I considered that was very conservative and I know personally, that number of cars did not anywhere near fill the requirements last fall.

Q.—So, then, the 3,500 would represent the number of cars engaged in handling the South Dakota traffic?

A.—That is the way I estimated it; yes, sir.

Q.—And not necessarily the number of cars actually within the borders of the state?

A.—There would not be that number of cars within the borders of the state at any one particular time, but they would come in and go out within a certain number of days in order to handle the traffic.

It will be noticed that Mr. Collins has selected a time when the maximum number of cars would be required and then he has taken the number required to handle the traffic to destination.

Since Mr. Collins has made a guess as to the number of freight cars in South Dakota, we will be justified in doing a little guessing.

By reference to the annual report for 1897, page 31, we find that the freight car mileage for 1897 was 287,037,043 miles, (including both loaded and empty). That is to say the movement of freight cars on the complainant's system of railway was equal to one car 287,037,043 miles. Mr. Collins says (page 434), that the total number of freight cars on the system was 28,214. This would indicate an average travel for each car of 10,138 miles.

The freight car mileage for South Dakota for 1897 was 10,985,606 miles (page 746). This, divided by the average car travel would indicate the use of 1,083 cars.

We now call attention once more to the tax statement (Exhibit 54, page 754), and we find the rolling stock on complainant's lines in South Dakota is listed as "Schedule C," which is as follows:

SCHEDULE C.

Showing the amount of "Rolling Stock" owned by said Railroad Company in use on each of the lines or branches owned, operated or leased in South Dakota by said Railroad Company.

NAME OF LINE.	Locomotives.		Passenger Cars.		Baggage, and Express Cars.		Parlor, Sleeping and Dining Cars.		Box, Freight and Stock Cars		Platform and Coal Cars.		Other Cars and Miscellaneous Rolling Stock & Portable Machinery.		TOTAL VALUE
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	
Iowa & Dak. Div., Main Line....	10	$35,000	3	$3,000	4	$2,000			100	$15,000	12	$1,440	35	$2,350	$60,790
Iowa & Dakota Division Running Water Brch.....	1	2,500	1	1,000	1	500			12	1,800	2	240	16	160	6,200
Iowa & Dak. Div., Eden Bch....	Only 39-100 of a mile in South Dakota—impracticable to apportion Rolling Stock to it.														
So. Minn. Div., Main Line.....	1	3,000	1	1,000	1	400			90	13,500	5	600	26	1,560	20,060
So. Minn. Div., Madison Bch....	1	3,000	1	1,000	1	400			15	2,250	2	240	20	200	7,090
H. & D. Div., Main Line.....	5	15,000	2	2,000	3	1,200	1	2,500	75	11,250	10	1,200	24	240	33,390
H. & D. Div., Whetstone Bch ...	1	2,500	1	1,000	1	400			7	1,000	2	240	8	80	5,220
H. & D. Div., Harlem Bch.....	1	2,500	1	1,000	1	400			12	1,800	3	360	8	80	6,140
H. & D. Div., Fargo Bch.....	Only 1 28-100 miles in South Dakota—impracticable to apportion Rolling Stock to it.														
Jas. Riv. Div., Main Line ..	3	9,000	2	2,000	2	800			40	6,000	3	300	28	280	18,380
Jas. Riv. Div.,Edgley Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Bowdle Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	16	160	6,160
Jas. Riv. Div., Eureka Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Orient Bch.....	Included in Bowdle Branch.														
S. C. & D. Div., Main Line..	6	18,000	5	5,000	3	1,500			45	6,750	2	240	32	320	31,810
S. C. & D. Div., Armour Bch..	1	2,500	1	500	1	500			10	1,500			4	40	5,540
S. C. & D. Div , Sioux Falls Brch	4	10,000	3	1,000	2	1,000			28	4,200	2	240	18	180	18,620
Total.....	Total....														$231,520

The statement here made is that there was in South Dakota on complainant's lines:

37 locomotives valued at	$112,100
24 passenger cars valued	21,500
23 baggage, mail and express cars valued	10,300
1 sleeping car valued at	2,500
464 freight and stock cars valued at	69,550
46 flat and coal cars	5,300
247 other cars, etc	5,770
	$227,020

We might condone the offense of complainant placing different valuations on its property for the purposes of taxation on the one hand and for the purposes of this case on the other, but complainant can hardly be permitted to say that for taxation they have only 37 locomotives, 464 freight cars, etc., and then for the purposes of this case say that they have 65 locomotives and 3,500 freight cars. One or the other, or both of these statements have been made in bad faith.

There is no evidence in this case as to the value of this equipment. The only attempt in that direction was made by calling the auditor, Mr. Winnie, and having him produce Exhibit 28 (page 563). The exhibit is as follows:

EXHIBIT 28.

Statement of Equipment Assigned to Lines in the State of South Dakota.

	No.	Cost per Car.	Total Cost.	Remarks.
Locomotives	65	$10,300.00	$ 669,500.00	Includes shop margin of 5
Box cars	3100	553.00	1,714,300.00	
Stock cars	200	548.00	109,600.00	Includes repair car margin.
Flat cars	175	440.00	77,000.00	
Refrigerator cars	25	787.00	19,675.00	
Coaches	38	4,862.00	184,756.00	Extra—10.
Sleeping cars	1	12,000.00	12,000.00	
Mail and express cars	13			
Baggage, mail & express	1			
Passenger, mail & baggage	3			Includes special for extra service & shop margin, all classes—14.
Passenger & Baggage	6			
3 mail	3			
3 baggage	3			Extra—4.
Cabooses	29	2,703.00	78,387.00	
Rotary snow-plow	40	800.00	32,000.00	Includes shop margin of 14
Tool, flanger, wr'king crs, etc	1		15,000.00	
Weed burner	15	600.00	9,000.00	
Pile drivers	1		1,000.00	
Pile driver tenders	2	5,000.00	10,000.00	
	2	450.00	900.00	
			$2,933,118.00	
Miles of road in South Dakota			1,101.06	
Cost of equipment			$2,663.90	

February 1st, 1898.

On cross-examination concerning this exhibit, Mr. Winnie testified as follows, (page 570 to 575) :

Q.—Mr. Winnie, have you any record in your office which shows the number of locomotives assigned to South Dakota?

A.—Yes, sir.

Q.—And the number is sixty-five?

A.—Yes, sir.

Q.—Do the records of your office show the names or numbers by which each locomotive is designated?

A.—Of the entire number of locomotives, yes. I know the numbers of all the engines on the road.

Q.—You have that in your office, have you?

A.—Yes, sir.

Q.—So you could give us the name or number by which each of these sixty-five locomotives is designated?

A.—No, sir.

Q.—You could not do that?

A.—No.

Q.—Have you any other description of these sixty-five locomotives by which they could be identified?

A.—No, sir.

Q.—You simply have the number of them?

A.—Of the entire locomotive equipment, so many are assigned to Dakota.

Q.—From what officer do you get this information, that is, who reports to your office the equipment assigned to South Dakota?

A.—The general superintendent.

Q.—That is Mr. Collins?

A.—Mr. Collins.

Q.—This would apply to all the equipment assigned to South Dakota as well as to locomotives?

A.—Yes, sir.

Q.—Is it not a part of the duties of your department to purchase equipment?

A.—No, sir.

Q.—Are you personally familiar with the value of equipment?

A.—I know what sums are paid for equipment so far as the receipted bills would be evidence of that fact.

Q.—Your information, then, of the value of equipment is confined to the information that comes to your office of purchases made?

A.—The receipted bills for the purchases of equipment which are on file in the office; yes, sir.

Q.—But you did not make any of the purchases yourself?

A.—No, sir.

Q.—Are you sufficiently familiar with the value of equipment so that you could fix the value of any given piece of equipment by an inspection of it?

A.—No, sir; only in the most general way, of course. I am not an expert on machinery.

Q.—The figures which you have given in "Exhibit 28" of $10,300 as the cost of each locomotive—explain how you arrived at that figure?

A.—That was the average price paid for locomotives for a series of years during which the Dakota lines were under construction. The same is true in regard to all other classes of equipment, prices of cars, etc.

Q.—Do you mean that the figures which you have given as the value of equipment in "Exhibit 28" is the average price paid during the years of construction in South Dakota?

A.—Yes, sir; from 1879 to 1886 and 1887.

Q.—From 1879 to 1887?

A.—1886 or 1887, I am not sure which.

Q.—And these figures have no reference to present values?

A.—No reference to present values.

Q.—And represent, of course, the cost, new?

A.—The cost new; yes, sir.

Q.—There is no definite assignment of box-cars to South Dakota, is there?

A.—No, sir. Do you mean by description or the numbers of the cars?

Q.—Yes.

A.—No, sir.

Q.—The cars for the conveyance of freight of all kinds simply pass from one part of the system to the other, as commerce requires?

A.—Yes, sir.

Q.—And there may be more or less cars in South Dakota at any given time?

A.—Yes, sir.

Q.—Where did you get the estimate of the number of cars that would be required for the traffic in South Dakota?

A.—It was reported to me by the general superintendent.

Q.—Mr. Winnie, is it your undertanding that the sixty-five locomotives now in South Dakota were purchased between 1879 and 1886?

Q.—Well, that I cannot tell. I do not know what

particular locomotives are now in the state of South Dakota, or when they were built.

Q.—Is not it a fact, Mr. Winnie, that is, if you are informed in that respect, that the locomotives are changed about from different divisions of the system?

A.—I understand that to be so; yes, sir.

Q.—And that the locomotives do not necessarily remain in South Dakota from the time they are purchased until they are worn out?

A.—That is my understanding; yes, sir.

Q.—So that in the ordinary course of events it would not be likely that the sixty-five locomotives now in South Dakota are the identical ones that were originally placed there?

A.—It would hardly be likely.

Q.—Were there considerable purchases during the construction period in South Dakota?

A.—Yes; there were very considerable purchases made necessary by the construction of those lines.

Q.—And when were the heaviest purchases made—about what years?

A.—Well, I could not tell you without reference to the books. I did not figure on any one year. I took a series of years.

Q.—Mr. Winnie, could you procure for us a record of the purchases of equipment during the years 1883 to 1887, inclusive?

A.—Yes, sir.

Q.—Have you a record where you could send and get it now, or would it take time to prepare it?

A.—No, sir; it would take time to prepare it.

Q.—Do you know, Mr. Winnie, the description of these locomotives in South Dakota as to whether they are eight-wheel engines or ten-wheel engines?

A.—No, sir.

Q.—It is a fact, is it not, Mr. Winnie, that the company is now constructing locomotives, and has been constructing locomotives in its own shops for some years?

A.—Well, to a certain extent. Principally switch engines, and a few of what they call class "B" engines. A very small proportion of the engines added have been engines built. They have been principally purchased.

Q.—It is a fact, is it not, that the engines that have been purchased within the last two or three years have been purchased at a price considerably less than $10,300 each?

A.—I think not, sir. I think we have been paying over $11,000 lately for locomotives; $11,246, I think.

Q.—What class or style of locomotives is that that you have been paying that for?

A.—I am not positive; I think they are ten-wheelers, though.

Q.—They are the large, improved modern engine?

A.—They are modern undoubtedly.

Q.—The engines that have been constructed in the shop have been constructed at an expense of something over $7,000, less than $8,000 possibly?

A.—I think we built some switch engines at a cost of $6,500 or $7,000, and some of these class "B" engines up to $8,000 or $9,000.

Q.—What do you mean by class "B" engines?

A.—I can't explain that to you. That is the designation given to them in reports as a certain class or type of engine intended for certain work.

Q.—Box cars at $553 each. Mr. Winne, has the company paid as much as that for box cars at any time within the last ten years?

A.—I cannot tell whether it was within the last ten years or not. I know between the years 1879 to 1883, inclusive, we paid as high as $650 for box cars.

Q.—Has the company paid as much as $553 for box cars at any time since 1884?

A.—I could not tell you without looking up the records, Mr. Null, but I think they have.

Q.—I see a memorandum opposite the item of locomotives which reads: "Including shop margin of five." What does that mean?

A.—That was reported to me in that manner by the general superintendent. He can explain that better, perhaps, than I can, but I presume it means allowing

for the number which naturally would be under repairs at any time or at all times.

How can the value of this rolling stock be determined by such testimony?

He says the company purchased certain equipments during certain years at certain prices, but no one testifies that the equipment so purchased was ever placed on the South Dakota lines.

The only attempt to name a value for the equipment in South Dakota disclosed by the records of this case was when complainant listed its property for taxation. It there appears to be worth $231,520.

Complainant certainly cannot complain if we allow that the property was only listed at about one-third of its real value, and hence calculate the value of rolling stock at $694,560.

We can do no better as complainant has not given us the age, size, style or capacity of any of its equipment, and without some description we were unable to call competent persons on the question of value.

Again, we insist that it was the duty of complainant to fully and honestly show the value of its property, and its failure to do so cannot have the effect of imposing that duty upon the defendants.

We believe we have fairly interpreted the testimony in this branch of the case, and have successfully shown that complainant's property in South Dakota is not worth more than nine million dollars.

In order to cover the possibility that we have estimated too closely, we can add 12 per cent. to our total estimate, $8,875,196.37, and yet not exceed the value placed on the property by the circuit court.

In disposing of this branch of the case the circuit court stated the situation exactly when it said:

"What is the fair present value of the railroad property used by the complainant in the State of South Dakota, upon which it is entitled to earn what the services rendered are reasonably worth?"

No Direct Testimony.

There is no direct testimony in the record as to the present value of the complainant's railroad property in the State of South Dakota. There is testimony as to the original cost of rolling stock bought years ago; there is testimony as to the original cost of steel rails bought years ago and there is estimated cost of a good many articles of property, by the officers of the company, but in no case does any witness swear to the present actual value of any piece of property owned and operated in the State of South Dakota by the complainant company. The only way that the court can get at the reasonably fair value of the complainant's property used and operated as aforesaid, is by estimating, I might say guessing, just as the witnesses of the complainant have estimated and guessed as to its value. The court was inclined at one time to be of the opinion that it was un-

able, from the testimony, to ascertain what the fair present value of the complainant's property in South Dakota was, in view of the conflicting statements of witnesses called upon that question and the great disparity between the value of the property fixed by the company for the purpose of this suit and the value of the same property fixed for purposes of taxation. But the court has carefully examined the testimony introduced in regard to the value of the property in question, and after considering all the circumstances and incidents, under the rules of the supreme court which should govern the court in fixing the value, the court is unable to find that the present fair value of the complainant's property in the State of South Dakota used for railroad purposes, is to exceed ten millions of dollars. It is true that the record shows that the property is bonded and mortgaged for an amount largely in excess of this sum, but the amount of a mortgage upon property is no evidence of its value, and, therefore, is not worthy of consideration. Neither is the fact that a railroad company bought engines at a certain price ten or fifteen years ago binding evidence that the engines now are worth a dollar, in the absence of any testimony as to where they have been used, how they have been kept, and what their present condition is. The record fairly shows that it is not the new property of the complainant company that is used in South Dakota. This being fixed

by the court as the fair and reasonable value of the complainant's railroad property, what would be a reasonable sum for it to charge for the services which it renders to the public?

This closes our discussion of this branch of the case, and confident that the findings of the circuit court will be sustained, we shall in the further discussion of the case assume the value of complainant's property in South Dakota to be ten million dollars.

Cost of Maintenance of Operation.

Complainant in its bill of complaint (paragraph 10, page 25), alleges that its operating expenses, including taxes, (also including cost of maintenance), for six years, beginning July 1st, 1892, and ending June 30th, 1897, amounted to $7,410,947.55.

This would make an average annual expense of $1,233,491.25.

Exhibit 9, page 29, is a statement prepared by the auditor, Mr. Winne, and offered in evidence by complainant. By this exhibit it appears that the total operating expenses, including taxes, for the fiscal years 1894, 1895, 1896 and 1897 amounted to $4,562,502.92, or an average annual expense of $1,140,625.73.

These sums were arrived at by estimating the expenses for South Dakota lines on the train mileage basis.

That is done in this way: The total expenses of the company for the entire railway system for 1897 was $18,577,539.08. The total miles run by revenue earning trains was 2,199,466 miles. The total expense divided by the total train miles gives an average expense of 87.63 cents per train mile. The train mileage for South Dakota for 1897 was 1,272,542 miles (page 610). This multiplied by the average, 87.63 cents, indicates a total expense for South Dakota lines for the year 1897 of $1,115,128.55.

Mr. Winnie states it at $1,111,394.72 (page 29).

Defendants were not satisfied with this method of estimating the operating expenses for South Dakota, because the trains in South Dakota are not as heavy and the track is not maintained as perfectly as upon the other lines.

Complainant, evidently for the purpose of answering this challenge, attempted to prove the actual expense in South Dakota, and thereby show that the actual expense was greater than the sum indicated by the train mileage. For this purpose the general manager, Mr. Earling, prepared and put in evidence a statement of what would be the actual annual expense of maintaining and operating the South Dakota lines under existing conditions. This statement is known in the record as "Exhibit 22" (page 235), and is as follows:

EXHIBIT 22.

STATEMENT OF THE COST TO MAINTAIN AND OPERATE THE LINES OF THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

1.	Repairs of track	$201,143 47
2.	Renewal of rails	157,930 97
3.	Renewal of ties	206,596 60
4.	Repairs of bridges	56,445 27
5.	Repairs of fences	11,307 60
6.	Repairs of buildings	50,630 30
7.	Repairs of locomotives	48,602 23
8.	Repairs of cars	59,370 17
9.	Repairs of tools and machinery	2,492 01
10.	Administration	51,918 41
11.	Station service	98,907 30
12.	Conductors, baggagemen and brakemen	95,345 49
13.	Engineers, firemen and wipers	100,575 95
14.	Train and station supplies	23,711 11
15.	Fuel consumed	229,839 45
16.	Oil and waste	6,996 88
17.	Personal injuries	1,343 34
18.	Damage to property	1,617 50
19.	Loss and damage to freight and baggage	3,630 34
20.	Taxes	98,482 68
21.	Insurance	8,460 94
22.	Mileage of cars	4,100 02
23.	Sleeping car expenses	862 49
	Total expenses	$1,520,309 92

On cross-examination Mr. Earling produced a statement, giving the details of each of the items contained in the foregoing exhibit and we offered it in evidence as a part of his cross-examination. (Exhibit 23, page 300).

The details of item No. 1 are as follows:

DETAILS OF ITEM NO. 1.—REPAIRS OF TRACK.

LABOR.		
7 roadmasters at $1,200 each per annum	$8,400 00	
125 track sections—$970 for labor per section, per annum for regular section force	121,250 00	
Usual extra gangs employed repairing and strengthening embankments; surfacing track, setting up and taking down snow fence, etc	46,395 00	
1 crossing watchman, per annum	420 00	$176,465 00
MAINTENANCE—Frogs and Switches.		
690 frogs, renewal 20 per cent., 138 per annum, at $18.00 each, delivered at Mitchell	2 484 00	
1,380 guard rails, renewal 10 per cent., 138 per annum, at $3.10 each	427 80	
690 sets switch ties and head blocks, renewal 12½ per cent., 86 sets per annum, at $46.43 each	3,992 98	
690 switch stands, rods, locks, chairs, blocking, etc., renewal 5 per cent., 35 sets per annum, at $20.00 each	700 00	
10 railroad crossings, renewal 20 per cent., 2 per annum, at $100.00 each	200 00	
Total	$7,805 78	
LESS SALVAGE.		
55,200 lbs. frogs.		
15,200 lbs. guard rails.		
7,000 lbs. switch stands, rods, etc.		
2,400 lbs. railroad crossings.		
79,800 lbs. at $4.50 per ton at Mitchell	179 55	7,626 23

MAINTENANCE of Crossings, Signs, &c.		
1,200 highway crossings—renewal of planking for 200 crossings per annum, 48,000 ft. at $13.00 per M. at Mitchell	624 00	
1,200 highway crossing signs—renewal of 10 per cent., 120 per annum at $5.00 each.	600 00	
40 railroad crossing "One Mile" signs, renewal 10 per cent., 4 per annum, at $6.00 each	24 00	
REPAIRS OF TRACK.		
Maintenance of crossings, signs, &c., 40 railroad crossing "Stop" signs; renewal 10 per cent., 4 per annum, at $6 00 each	24 00	
2,000 whistling posts (two for each crossing outside of cities); renewal 10 per cent., 200 annum, at $1 00 each	200 00	
256 station mile boards; renewal 10 per cent., 26 per annum, at $6.00 each	156 00	
510 mile posts; renewal 10 per cent., 51 per annum, at $1.00 each	51 00	
1,100 sets rail rest posts; renewal 10 per cent., 110 per annum, at $1.00 each	110 00	
10 sets timbers for railroad crossings; renewal 20 per cent., 2 per annum, at $23 20	46 40	
100 miles snow fence; renewal 12½ miles per annum, at $864.00 per mile	10,800 00	12 019 40
TRACK TOOLS.		
152 hand cars, at $35 00 each, $8 220.00; renewal, 8 per cent	657 60	
131 push cars at $19.00 each, $2,489 00; renewal, 8 per cent	199 12	
Valuation of tools for section gangs and extra gangs, $13,249.00. Replacements, 12½ per cent	1,656 12	2 512 84
TELEGRAPH DEPARTMENT.		
Labor furnished by railway company for repairs of telegraph lines, 3 repairers at $840.00 per annum		2,520 00
Total repairs of track		$201 143 47

The first item is composed largely of the wages of the road masters and section men and indicates the expenditures made to keep the track and road bed in order. It is an item easily checked as the data is taken largely from the pay rolls. The charge to South Dakota (Earling's estimate) is very light. It should be so because we know as a fact that no more is spent on Dakota lines in this direction than is absolutely necessary and there is no track walking or patrolling in Dakota as upon the heavier lines in the eastern states.

DETAILS OF ITEM NO. 2.

RENEWAL OF RAILS.		
Renewal of rails 6¼ per cent. per year for 1,101 miles; 68 81 miles, 60 lbs. per yard, 6,488 tons at $24.50 per ton.....	$158,956 00	
Angle bars, 722 tons at $31.50 per ton...	22,743 00	
Track bolts, 75 1-10 tons, at $44.50 per ton	3,367 65	
145,200 nut locks at $6.50 per M..	943 80	
7,630 lbs. washers.....	175 00	
344 kegs new spikes, at $4.00.....	1,376 00	
	$187,561 45	
LESS SALVAGE.		
5 633 tons rails.		
145 3-10 tons splice bars.		
41 7-10 tons bolts.		
34 2-10 tons spikes.		
5,854 2-10 tons, at $8 00 per ton in Mitchell	46,833 60	$140,727 85
Cost of distributing and laying 68.81 miles of new rails, and of picking up and loading 68 81 miles of old material, at $250 per mile.....		17,203 12
Total renewal of rails.....		$157,930 97

This item brings us to the interesting subject of rail wear.

Mr. Earling testifies as follows, (page 226):

A—In the item of renewals of rails are included the rails which are necessary for replacement each year, together with the joint fastenings which consist of the angle bars, track bolts, nuts, washers, and whatever else enters into the replacement of rails. *The rails on the South Dakota lines require replacement on an average, at least once in sixteen years.* That is a very conservative statement, and *the process of this replacement is going on all the time.*

Mr. Earling repeats this statement several times and insists that a 60-pound steel rail will not wear more than 16 years on the South Dakota lines.

Inasmuch as steel rails have only been in existence for about 30 years, the question as to how long they will wear may not be definitely determined, but the authorities on the subject agree that the rail is worn out by the wheels of the locomotive pulling the loads over it and that the life of the rail is to be measured by the number of trains passing over it, rather than by the number of years in the track.

On lines of railway where there are many trains each day rails have been worn out in so short a time that the length of time in the track and the elements were not a factor in the problem. Under these circumstances

rail wear has been definitely ascertained. But where there are so few trains that the rail remains in the track for a long period of time, so that the weather and other influences are to be considered in connection with the wheels of the locomotive, the life of a steel rail is as yet undetermined.

Prof. Whitney testifies on this subject as follows, (page 849):

"From my own personal observation of the brand and wear of rails on the Pennsylvania road and from my knowledge of the position of experts on this subject, the life would be from thirty to fifty years. That is, thirty to fifty years is conservative for an ordinary average railway, and the traffic being light here, it might go considerably further. It has to be a matter of opinion, as the steel rails have not been used fifty years."

The Economic Theory of the Location of Railways, by Arthur Mellen Wellington, is a standard authority used as a text book in our public schools and colleges and by railroad engineers generally. (Page 848.)

On the subject of rail wear this authority on page 119 says: (Page 847.)

A. "The average life of a good steel rail, properly manufactured and inspected, so as to eliminate all imperfections arising from the lack of ordinary care and skill, and weighing 60 to 80 lbs. per yard, according to

the weight of engines, has now been determined with considerable approach to certainty, to be about 150,000,000 to 200,000,000 tons, or (what is probably a more correct way of putting it,) from 300,000 to 500,000 trains. From 10 to 15 lbs. or three-eights to five-eighths of an inch in height, of the head of such a rail, is available for wear, and abrasion takes place at the rate of about 1 lb. per 10,000,000 tons, or one-sixteenth of an inch per 14,000,000 or 15,000,000 tons. This durability may be regarded as near a minimum for strictly first-class rails, and many recorded observations indicate a much higher durability."

Professor Whitney also gives an example as follows: (Page 849.)

Q. I will ask you if you now call to mind any particular observation which you have made of the performance of a steel rail?

A. Yes, sir; I remember distinctly on the west end of the Pennsylvania Company's lines—Pittsburg, Fort Wayne and Chicago—somewhere near the state line between Indiana and Illinois, a rail with a brand of 1874 or 1875, which I observed in 1890, still in the track—single track. All of the heavy traffic of that line passed over it, and it was still in fair condition, having been a sixty pound steel rail; it was worn considerably, and of course was soon renewed.

Q. What was the daily number of trains passing over that rail, at the time you made the observation?

A. I could not say definitely; the traffic over that line is pretty well known; I should say thirty trains per day each way would be a conservative estimate.

Q. That would make about sixty locomotives passing over that rail each day?

A. Yes, sir.

Mr. Harrahan, second vice-president of the Illinois Central Railway, on cross-examination, testifies on this subject as follows, (page 602):

Q.—In speaking about the life of a rail, is not the life of a rail measured more accurately by the number of tons carried over it than the years in the track?

A.—Yes, sir; when you have got an extensive tonnage. Then, of course, the tonnage would govern. When you have got a light tonnage, it won't amount to that extent it does when it is a heavy tonnage.

And again on page 605:

A.—I know what "relayers" are. We have relaid them ourselves, and we do that kind of thing right along. We take the rails up. For instance, in 1890 we had nothing but sixty-pound steel rails on the line of the Illinois Central road. It was too light for the traffic. We took it up and put down seventy-five pound rails, and then moved the sixty-pound rails onto the branches. I expected those rails would last ten, fifteen, eighteen or twenty-five years. It depends on the amount of traffic, and the particular branches on which it was laid.

Q.—So that those "relayers" under a light traffic, indicated by a showing of ninety-six tons to the train, and one train each way a day—

A.—Would last a long while. No telling how long it would last.

According to these authorities, the minimum life of a steel rail, measured by the number of trains passing over it, would be 300,000 trains. The train mileage for South Dakota for 1897 was 1,272,542 miles. This train mileage is equal to 1,156 trains passing over the 1,101 miles of track in South Dakota per annum. On the minimum basis of 300,000 trains, the rails would wear 259 years. According to Mr. Earling's estimate, the rails would wear out in sixteen years, with an average of 1,156 trains per annum or a total of 18,496 trains. On this basis the rail which Prof. Whitney observed in the tracks of the Pennsylvania railway carrying sixty trains a day would have been worn out in one year.

While the rails may not last 259 years on account of the weather and influences aside from actual rail wear, yet it must be apparent that Mr. Earling is far from the fact when he says they will wear out in sixteen years.

Mr. Earling's estimate amounts to an annual net expenditure of $157,930.97 for rail renewal. This will amount to an average of 12.4 cents per train mile. That is to say, according to Mr. Earling's estimate the trains on the South Dakota lines wear out 12.4 cents of

rail for every mile they move over the track. We find from Exhibit 56 (page 769) that the total rail renewal for complainant's entire railway system for a period of ten years, 1888 to 1897, inclusive, amounts to the sum of $5,408,273, or an average annual expenditure of $540,827 for the entire road, or an average of about $87.88 per mile of main line. According to this, it would only cost $96,755.88. This would not be a fair test, because the trains and traffic are lighter in South Dakota than upon the balance of the system, and hence the rail wear in South Dakota would be less. Mr. Earling admits this in his testmony, where he testifies as follows, (page 284):

Q. I will ask the question in this form. If in your judgment, based upon your experience, the actual cost for annual repairs to tracks in South Dakota would amount to one-sixth of the entire expense to the whole system for that item?

A. *No, sir; it would not amount to one-sixth, because the traffic is lighter in South Dakota and the wear and tear is not so great.* In the matter of ties, repairs to buildings and many other items, there would be no difference. It would be the same on the South Dakota lines as it is on any of the other lines, *but not as to rails. The expenses would be somewhat less in South Dakota than in some of the other states where the volume of traffic is larger.*

On page 31 of the annual report for 1897 we find that the train mileage (revenue trains) for 1895 was 19,380,-

472; 1896, 22,285,659; 1897, 21,199,466 miles, making a total for the three years of 62,865,597 miles. By reference to Exhibit 56 (page 769) we find that rail renewals cost for 1895, $454,113; 1896, $468,727; 1897, $681,274, a total for the three years of $1,604,114. Divide this total expenditure by the total train miles and we have an average of 2.55 cents per train mile. How can Mr. Earling justify his estimate which equals 12.4 cents per train mile for South Dakota and at the same time admit that the rail wear is not as great in South Dakota as upon other lines of the system?

According to the United States census of 1890, the total train mileage for that year in the United States was 741,000,000 miles, and rail renewals cost that year $9,198,081. This is an average of 1.24 cents per train mile.

On page 75 of the 11th annual report of the interstate commerce commission we find that the total rail renewal for the United States for the year 1896 was $10,419,393, and 1895 was $10,124,633, and on page 59 of the same report we find the train mileage stated as follows:

	1896.	1895.
Passenger train mileage....	332,854,218	317,565,615
Freight train mileage.....	479,500,170	449,291,238
Total.....	812,354,388	766,856,853

These figures indicate an expenditure of 1.28 cents

per train mile in 1896, and 1.3 cents per train mile in 1895.

Again we quote from Wellington. On page 121 he says: "The reasonable cost per train mile of rail wear may, on the basis of the facts above given as to the life of rails, be estimated at from .3 to .5 cents, as follows:

"Cost of one mile of steel rails, 95 long tons, at $30	$2,850
Less scrap value of unworn steel, say nearly half	1,350
Leaving as net cost of wearable portion, per mile	$1,500

"Divided by total life of 300,000 to 500,000 trains, this gives .3 to .5 cents per train mile; but in view of the present difficulty of getting good rails, and tendency to increase the weight of trains, we assume the even figure of *1 cent per train mile as a maximum, which there is no need of ever exceeding.*"

It will be remembered that by the testimony of Mr. Earling and Mr. Harrahan and others, that in the last few years large lines of sixty-pound steel have been taken up and replaced with heavier rails. We also know, as a fact, that many miles of iron rails have been taken up and replaced with steel. So that the statistics we have given would naturally show a larger expense for rail renewal than it would if there had been nothing done except to renew worn-out material, and hence we may fairly assume that Wellington's estimate is borne out by the statistics we have cited.

We again call attention to the fact that the complainant has a full and complete record of rail renewals in South Dakota and could have shown the court exactly what sums have been annually expended for that purpose. True, Mr. Earling testifies that "It would be necessary to write to each section foreman in order to get that information" (page 617), and this is complainant's excuse for not proving the actual expenditure. However, we find by the testimony of complainant's road master, Mr. Nelson, that full reports are made of all labor and materials used in repairs of the track, and we have the blank used for the purpose of making such report (Exhibit 69, page 805). There can be no question whatever but what the roadmaster's department could have given the exact facts concerning these expenditures, as we find that the auditor, Mr. Winnie, testifies on page 22:

Q.—Mr. Winnie, you stated yesterday the method in which the earnings are ascertained. State the method by which you ascertained the expenses, operating expenses of the system?

A.—From the beginning of the operation, the first thing, the first principal item is the labor. Pay rolls are made up by the different superintendents for the train service and the men employed on the road on maintenance of the way. They are made up by the storekeeper or his assistant for the engine men and round house men. The pay rolls for the clerks are made up

in this building. The material is purchased in general by the purchasing agent. He buys everything except the coal, rails and ties. His purchases are charged by him to the different departments to which they are shipped; the general store or the superintendents as the case may be. Each month the superintendent makes a report in detail of the material used. Those are examined in the auditing department and then summarized there. Each department is given its proper credit for material used, and the account for which it is used is charged. If it is an operating expense it is charged to its proper expense account; if for new work, construction of locomotives or cars or new structures additional to the property, it is charged to cost of production. In addition to that there are other expenses; for rents, settlement of personal injury cases, losses and damages to freight, damage to property, stock killed, fire losses, insurance, and matters of this nature that go through no particular department. A voucher is made and the expense charged on the auditor's book to the proper account.

And again on page 40:

Q.—Then, during that construction, if, during a certain month, you purchased a supply of rails and ties, the purchase was charged directly to construction account, was it?

A.—It would not be charged from the bills purchased.

Q.—That is what I want to get at.

A.—No, when the rails were purchased they would be shipped; rails for the use of the entire system would be purchased or contracted for at one time. As fast as those rails arrived they would be shipped all over the line where they were needed and when they were shipped they would be charged to the responsible officer at that place, the division superintendent, or whoever it might be; they would be charged against him. Then when they were used he would make a report of how and where they were used, and he would be given credit, and the proper account charged, whether it was repairs, renewal or whatever account the material was used for.

Q.—So that when a given quantity of material was shipped to the superintendent of the South Dakota Division, it stood upon your books as charged to that superintendent until he reported to you the use which he had made of the material?

A.—Yes, sir.

Q.—And then it would be either charged to the construction account, or to renewal account?

A.—As it was used, yes sir.

Q.—Have you an account designated "Renewal Account?"

A.—We have an account designated "Renewal of Rails and Renewal of Ties and Expense account."

Few trains and light traffic is one of the leading features of complainant's contention in this case. This ought to mean a minimum rail wear and we ought to figure rail wear at less than the average. Mr. Earling's estimate amounts to 12.4 cents per train; just about ten times the average in the United States and five times the ten year average on complainant's railway system.

If we accept the average in the United States and entirely ignore the fact that complainant is using old rails in South Dakota, worth only $12.85 per ton, we find that at the rate of 1.24 cents per train mile for 1,272,542 miles, the rail renewal will only cost $15,779.52, or about one-tenth the sum estimated by Mr. Earling.

Renewal of Ties.

Details of item No. 3, (page 302):

Number of ties in track, 3,562,000; 10 per cent. required for renewal per annum, 356,200 at 58 cents each, $206,596.00.

We have three exceptions to this item:

1st. There are not to exceed 3,342,592 ties in the track.

2nd. Tie renewal in South Dakota will not amount to 10 per cent. per annum.

3rd. Fifty-eight cents per tie is an over valuation.

The first question, number of ties in the track, has been fully discussed.

On the second proposition, Mr. Earling testifies as follows, (page 226):

Q.—The next item is renewal of ties, $206,596. Explain that item?

A.—*The number of ties in the company's track in the State of South Dakota is 3,562,000. These ties have to be renewed at least once in ten years. They do not actually last that long,* but I have taken it to be once in ten years; therefore, one-tenth of them must be replaced each year, in order to keep the track safe. That is equivalent to 356,200 ties each year. And such renewal amounts to $206,596 per annum.

And again on page 258:

Q.—You say that the average life of a tie in South Dakota is ten years?

A.—Yes, sir.

Q.—What kind of ties have you used chiefly in your South Dakota line?

A.—We are now using chiefly cedar ties.

Q.—The amount which you have given as cost for renewal of ties on your South Dakota lines is actual, I believe?

A.—It is based upon the ties having to be renewed every ten years, or ten years being the life of a tie, but

it is less than the amount expended because the ties do not last quite ten years.

In this instance as in case of rails no records or other evidence of actual renewal was offered and we have nothing from complainant as to the life of a tie in Dakota except mere opinion.

We called Mr. Cronk, the book-keeper in Superintendent Oliver's office at Huron and proved the actual tie replacement on the C. & N.-W. lines in Dakota for a period of nine years, 1889 to 1898 inclusive. The testimony shows the C. & N.-W. operates 771 miles of main track and 68 miles of side track, a total of 839 miles. (Page 909.)

His testimony was as follows: (Pages 908-909.)

Q.—What are your duties as clerk of the superintendent?

A.—Keeping of the accounts, making a portion of the pay rolls.

Q.—Do you keep the account of the ties and rails used in replacement and repairs?

A.—Yes, sir.

Q.—And have you kept such account since 1884?

A.—Yes, sir.

Q.—I will ask you if you have under your control records by which you could tell us the number of ties used in the replacement in the lines of the Chicago & North-Western Railyay Company in the state of South

Dakota, beginning with the year 1889, and up to the present time?

A.—Yes, sir.

Q.—Can you give it prior to that time?

A.—No, sir.

Q.—Please state why.

A.—The records were destroyed prior to 1889 on account of accumulation.

Q.—I will ask you to state the number of ties used for replacement and repairs during the year 1889 on the Chicago & North-Western Railway in South Dakota.

Mr. Kittredge: Complainant objects to such testimony for the reason it is incompetent and immaterial.

A.—As I understand the question, it is in South Dakota?

Q.—Yes.

A.—The figures we have are for the whole of the Dakota division lines together.

Q.—How much road does that include outside of South Dakota?

A.—About sixty-one miles.

Q.—That would be the track running into North Dakota at Oakes?

A.—Yes; I include that in here, but it includes principally the line from Tracy to the Minnesota state line.

Q.—That is, it includes the line from Tracy to Elkton?

A.—Yes, sir.

Q.—Now, the figures you are about to give us cover all the Dakota lines and the lines to Oakes and the line from Elkton to Tracy?

A.—Yes, sir.

Q.—What would be the total number of miles of line, including those two?

A.—Seven hundred and seventy-one miles.

Q.—And how many miles of side-tracks?

A.—Sixty-eight.

Q.—Now you may state how many ties were used in repairs and replacement during the year 1889 in this Dakota division, and you may further state the number each calendar year from 1889 to the present time?

Mr. Kittredge: Complainant objects to such evidence for the reason it is incompetent and immaterial.

A.—In 1889 29,025
In 1890 32,850
In 1891 51,625
In 1892 61,275
In 1893 107,000
In 1894 97,500
In 1895 49,500
In 1896 91,600
In 1897 94,500

The foregoing is a record of the actual experience of the C. & N.-W. R'y in South Dakota for a period of

nine years. We find the total replacement amounts to 614,875 ties. This makes an average of 68,319 per annum for 839 miles, or 81.4 ties per mile per annum. At this rate for 1,187 miles the renewal would amount to 96,621 ties per annum on complainant's South Dakota lines.

We have heretofore discussed the value of ties and find they are worth 21 cents, and that the freight as figured by Mr. Earling, amounts to 20.9 cents, making ties worth in Dakota 41.9 cents each. On this basis the renewal of ties would only amount to (96,621 ties at 41.9 cents) $40,486.39, or $34.10 per mile of road. This is the result of actual experience for the last 9 years in South Dakota, and even though it may appear to be below the average, yet it is the actual and therefore more valuable than the expert speculations of complainant's witnesses.

By reference to Exhibit 56 (page 769) we find that the entire expense of tie renewal on complainant's system of railway consisting of 7,747.55 miles (including side tracks) for ten years, 1888 to 1897 inclusive, amounted to $8,382,498, or an average of $838,249.80 per annum. This indicates an average annual expenditure of $108.19 per mile, while according to Mr. Earling's estimate, tie renewals in South Dakota cost $174.05 per mile (1,187 miles.)

It must be remembered that South Dakota trains and traffic are not as heavy as upon complainant's main lines; that the roadway is not so well maintained and that heavy trains and heavy traffic cause the rails to cut into the ties (at least so complainant's witnesses have testified) and that in many cases ties are destroyed by this cutting process long before they are decayed.

Complainant's witnesses have fixed the average tonnage of the South Dakota trains at 96 tons per train. (Page 240.)

Complainant called Mr. Sanborn, the general superintendent of the Chicago & North-Western R'y, and on cross examination Mr. Sanborn testifies concerning this cutting process as follows: (Page 952.)

Q.—The freight traffic of 96 tons to the train would be very light, would it not?

A.—Yes, sir.

Q.—And would you say that the ordinary freight traffic of 96 tons to the train would have the effect of cutting out the ties, as you speak of?

A.—Not when the trains run as far apart as they do in South Dakota.

Q.—One train each way a day?

A.—One train each way a day, I think they would last for some time.

And again on page 254:

Q.—This process of cutting into the tie would be arrested quite a little with a sixty-pound rail as compared with a fifty pound rail?

A.—Yes, sir; it would be better than a fifty-four pound rail, but there is more depending on the traffic put on it in regard to its cutting in the tie. I have noticed that on the Iowa division they are continually taking out good cedar ties to-day that are not decayed and are sound but are not fit for those tracks simply on account of the traffic they have over those rails.

Q.—And it would also be affected by the question as to whether the ties were laid 2,600 or 3,000 to the mile, would it not—that is, the quantity of ties in the mile?

A.—Why, the more bearing you get for the rail, of course, that would affect it.

Q.—It makes quite a difference whether there are fifteen or eighteen ties to the rail—three extra ties to the rail would make some difference?

A.—It would make some difference, of course.

Q.—Passenger trains in that territory are not heavy enough to affect the the problem?

A.—Not unless the cars would; it is not the load.

All this goes to show that while the average upon complainant's lines is $108.19 per mile, the South Dakota lines are minimum factors in the problem and that the tie renewals for South Dakota are very much less than

the average; certainly not greater than the average as Mr. Earling's estimate would indicate.

With the testimony of complainant so completely at variance with actual experiences are we not justified in basing our estimate upon the actual experience of the C. & N.-W. R'y? As we have found, this would amount to $34.10 per mile, or $40,486.39 for the 1,187 miles of road.

If complainant suffers an injustice by this method of estimating this item, it has only itself to blame. It has in its possession the records and information by which it could have shown the court exactly what its experience in tie renewals in South Dakota has been for a period of 12 to 18 years, and we would not now be speculating on the subject.

Passing the item of repairs to bridges, we come to the item repairs of fences.

DETAILS OF ITEM NO. 5.

REPAIRS OF FENCES.

Fence for 505 miles of track, 1,010 miles of fence; renewal 6 2-3 per cent per annum, 68 miles, at $133.20, for material and labor per mile	9057 60	
1,000 cattle guards, renewal 12½ per cent. per annum; 125 at $18.00 each	2,250 00	$11,307 60

This is a small item, yet it is great. We have found heretofore that by actual count there are only 221 cattle guards in South Dakota. Yet Mr. Earling estimates an annual renewal of 125. If Mr. Earling is right in

his estimate of 12½ per cent., the actual renewal would be 26. And we find Mr. Whittemore has estimated this cost at $10 each, (page 423) making this item $260 instead of $2,250. We have also found that the fence is estimated according to the number of cattle guards, and that on this basis there is only 110 miles of right-of-way fenced, or about one-fifth the amount of Mr. Earling's estimate. This would give $1,811.54 for fence renewal. The item would thus be reduced from $11,307.60 to $2,071.54.

DETAILS OF ITEM NO. 6.

REPAIRS OF BUILDINGS.

5 per cent. per annum on valuation of $94,0606.00, being original cost.....	$47,030 30	
4 pump repairers—wages $900 each per annum.....	3,600 00	$50,630 00

We may not be in a position to question Mr. Earling's percentage, but we insist that it should only be applied to the actual value or cost of the buildings. This would be 5 per cent. on $564,363.60.

DETAILS OF ITEM NO. 7.

REPAIRS OF LOCOMOTIVES. $18,602 23

This amount is arrived at by taking the total cost of repairs of locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. The total locomotive miles in South Dakota multiplied by the cost per mile gives the above amount for the year ending June 30th, 1897.

Mr. Earling explains how this is estimated, as follows (page 227):

Q.—Item No. 7, repairs to locomotives. Explain that?

A.—This amount is arrived at by taking the total cost of repairs to locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. The total locomotive miles made in South Dakota, multiplied by the cost per mile on the entire system gives the amount for the year ending June 30, 1897.

From this testimony we find that this is purely an estimate, based upon the miles run by the locomotives. We insist that the light locomotives pulling light trains in South Dakota do not require the repair that the large locomotives pulling heavy trains on complainant's main lines do.

Complainant has in its possession records showing exactly the cost of repairs to locomotives, and this exact amount could have been shown.

We secured and offered in evidence Exhibit 72, page 889. This is a record of the performances of locomotives for the month of February, 1898, on the James River division in South Dakota.

DEFENDANT'S EXHIBIT 72.

MONTHLY STATEMENT.

Performance of Engines Chicago, Milwaukee & St. Paul Railway, James River Division, Showing Full Expenditure in Detail for the Month Ending February 27, 1898.

Engines	ENGINEERS	No. of Miles Run				Pints of				Pounds Waste	Cords of Wood	Fuel Oil	Tons of Coal	Cost of Repairs	Wages of Engineers, Firemen & Wipers	Value of Oil and Waste	Value of Fuel	Total Cost	Cost of repairs per mile—Cts	Cost of Wages per Mile—Cts	Cost of Oil per Mile—Cts.	Cost of Fuel per Mile—Cts	Total Cost per Mile	Average Miles		Engines
		Passenger Trains	Freight Trains	Switch Trains	Total No. Miles	Valve Oil	Signal Oil	Hdlight oil	Machine oil															Pint Oil	Tons Coal	
113	J. Richardson	276	2451	....	2727	23	....	24	36	17	4	19	119.3	$15.34	$190.60	$3.84	$192.27	$402.05	.56	6.99	.14	7.05	$14.74	32.86	22.86	113
138	B. F. Slater and others	....	....	1278	1278	12	4	56	16	6	7	19	32.4	14.36	103.75	2.18	51.13	174.42	1.12	8.12	.17	4.24	13.65	14.52	39.44	138
144	G. S. Perry and Noble	3380	....	....	3380	19	....	38	72	17	9	28	68.2	54.19	235.10	4.97	112.10	406.36	1.60	6.95	.15	3.32	12.05	26.20	49.56	144
150														101.85				101.85								150
274	H. Noble and Perry	3380	....	....	3380	16	4	24	64	17	12	29	68.2	25.03	235.10	4.45	113.01	377.59	.74	6.96	.13	3.34	11.17	31.30	49.56	274
381	F. C. Darling and Aggas	....	2967	....	2967	16	....	2	61	28	7	23	89.1	18.18	208.00	4.69	144.89	375.76	.61	7.01	.16	4.88	12.66	37.56	33.30	381
384	O. F. Ladd and West	297	532	....	829	16	....	....	32	2	....	3	28.0	12.39	58.60	2.23	44.83	118.05	....	....	....	....	....	....	....	384
390	W. Aggas	....	1290	....	1290	14	4	4	28	11	3	11	51.1	40.28	90.35	2.57	82.77	215.97	3.12	7.00	.20	6.42	16.74	25.80	25.24	390
423	O. F. Ladd and West	166	2261	....	2427	24	4	36	28	32	7	26	61.0	14.47	169.72	4.63	99.96	288.78	.59	6.99	.19	4.11	1 .88	26.38	39.79	423
522	A. Perry and Brownlee	....	....	474	474	12	6	12	48	15	....	9	19.8	201.55	43.58	3.55	32.37	281.05	....	....	....	....	....	....	....	522
564	J. E. West and Davis	2872	....	....	2872	36	4	24	84	24	....	22	118 2	30.03	199.80	6.70	191.44	428.06	1.05	6.96	.24	6.66	14.91	19.41	24.79	564
	Total	10371	9501	1752	21624	188	26	230	469	169	58	189	655.3	8527.67	$534.60	$39.90	$1067.77	$3169.94	2.44	7.10	.18	4.94	$14.66	23.68	33.00	

J. N. BARR,
Supt. Mo. Power.

THERON HIGBY,
General Storekeeper.

From this, the only actual record in evidence on the subject, we find that the locomotives ran 21,624 miles. That the repairs cost $527.67 or 2.44 cents per mile. At this rate the repairs in South Dakota on the basis of 1,272,542 miles run in 1897 would amount to $31,-050.02.

Why is it that complainant did not prove up this item by the record, showing the actual expenditure, instead of submitting Mr. Earling's estimates and conjectures?

Items 8 and 9 we have not the data with which to make any tests.

DETAILS OF ITEM NO. 10.

ADMINISTRATION, $51 918 41

Management and general offices, foreign agency and advertising, legal expenses, New York office expenses, proportion of total expenses for the year ending June 30th, 1897, on earning's basis.

This item contains the salaries of the general officers. We attempted to inquire into this item, but were met with a refusal to answer. The auditor, Mr. Winnie, was on the stand, and the cross-examination on this point was as follows:

Q.—Who presides at the meetings of the directors?

A.—The president, when he is there.

Q.—The president of the road?

A.—Yes, sir.

Q.—What is the salary of the president of the road?

Mr. Kittredge: Objected to as incompetent and immaterial.

A.—I don't know.

Q.—You are unable to state?

A.—I am unable to state.

Q.—And who is the general manager of the company at this time?

A.—The general manager of the company at this time is W. G. Collins.

Q.—Are you able to state the salary he is paid by the company?

A.—I am not.

Q.—The payment of these salaries is certified through your department?

A.—Not in detail.

Q.—Can you secure the information called for in the last two questions from the records of your office?

A.—No, sir.

Q.—Do you know in which department a record is kept of those salaries?

A.—I decline to answer.

Mr. Temple: Let the record show that the witness declines to answer the question under the advice of counsel for complainant.

(Witness excused).

This was certainly a legitimate inquiry, and were it not for a desire to arrive at the actual cost of operation

we would insist upon the rejection of this item, because of the refusal of complainant to submit the facts to the court.

We have no data by which to test the accuracy of items No. 11, 12, 13 and 14.

DETAILS OF ITEM NO. 15.

FUEL CONSUMED, $229,839 15

The value of fuel consumed by locomotives in South Dakota during the year ending June 30, 1897.

Mr. Earling testifies that the coal consumed in South Dakota for the year was 57,191 tons (page 617), and figures over $4.00 per ton. According to these figures it would require a ton of coal for every 22.25 miles run by the trains in South Dakota, or 85.34 pounds to the mile; and would cost, at $4.00 per ton, 17 cents per train mile. We find by "Exhibit 72," that the passenger locomotives, No. 144 and 274, on the James River division, for the month of February, 1898, ran 6,760 miles. That they consumed coal at the rate of a ton of coal for every 49.56 miles, and that it cost 3.32 cents for No. 144 and 3.34 cents for No. 274 per mile. That freight engine No. 381 ran 2,967 miles and consumed fuel at the rate of a ton of coal to every 33.30 miles, at a cost of 4.88 cents per mile.

The average stated in this exhibit is 33 miles to the ton of coal, and the average cost is stated at 4.94 cents per mile run. We find that the coal is figured at $1.60

per ton. That is, locomotive 384 is not charged with any wood, but is charged with 28 tons of coal at $44.83. This would make $1.60 a ton, with three cents over, which probably represents the value of the fuel oil.

It will be remembered that this is the record for a winter month, and therefore would be a maximum, rather than a minimum or even an average month. In cold weather the consumption of fuel by the locomotive increases at the rate of 1 per cent. for each two degrees Farenheit difference of external temperature. (Wellington, page 137). During this month the passenger trains are heated by steam from the locomotives. From all these facts it must be apparent that "Exhibit 72" shows the maximum consumption of fuel on one of the important South Dakota divisions of complainant's railway. On this basis the quantity of coal consumed would be 38,562 tons for the train mileage. Add 10 per cent. for switching and trains other than revenue trains and we have a total of 42,418 tons.

Prof. Whitney in his testimony gave an estimate of fuel consumed by complainant's locomotives in South Dakota, as follows (page 853):

Q.—Have you estimated the pounds of coal consumed by a locomotive in running one mile upon the average of freight and passenger service?

A.—Yes, sir.

Q.—I will ask you to state the number of pounds of

coal per mile, as you have estimated it, as being the average between the freight and passenger?

A.—I have taken forty pounds of fuel for the passenger and seventy pounds of fuel for the freight, and using the revenue train miles obtained from the annual report submitted, 1,277,500 miles in South Dakota, applying this average of the forty and seventy in the ratio of two-thirds freight trains and one-third passenger trains, which this report shows to be the proportion of train miles in South Dakota, I obtained 38,180 tons of coal. Adding to this 10 per cent. for switching mileage, which is large, I think, for this locality, or 3,818 tons, makes a total of 41,998 tons.

Q.—I show you blue print which purports to be a monthly statement of the performance of engines of the Chicago, Milwaukee & St. Paul Railway Company, James River division, showing fuel expenditure for the month ending February, 1898, and ask you to state from this statement the number of locomotive miles that is disclosed there?

A.—Passenger trains, 10,371; freight, 9,501.

Q.—And the switching trains?

A.—1,752 miles; total, 21,624.

Q.—Now what per cent. of the total is the switching miles?

A.—It is between 8 and 9 per cent.

The value of this coal as shown by "Exhibit 72" as fixed by the complainant is $1.60 per ton. We find that the complainant secures its coal for these trains of the Excelsior Coal Company in Iowa. This company is owned by complainant and its business is to furnish coal to complainant at cost. (Page 62-63).

We have proven by the testimony of Mr. Smith, a coal dealer in South Dakota, that Iowa coal is worth 85 cents a ton at the mines and that the freight on coal from the Iowa mines to Dakota is $2.00 a ton. (Pages 855 and 856).

This coal is hauled in on the regular trains of the company, and Mr. Earling has included in his estimate all the expense incident to the operation of the trains, hence to now allow a freight charge would amount to a duplication of the cost of bringing in the coal.

Then, again, for the purposes of this case, no freight should be allowed, unless it was also included in the earnings.

Mr. Bird, the complainant's traffic manager, testified on behalf of the complainant concerning this subject, as follows (page 367):

Q.—Mr. Bird, you say that the South Dakota lines are not charged anything for material or supplies

hauled by those lines. They could not be charged anything, could they, Mr. Bird?

A.—I do not see how they could be charged anything for that service, any more than I can see how we can divide the through rate from one point to another, on a part of the system, but the service has to be performed and the service costs money.

Q.—The South Dakota lines are a part of the lines of the Chicago, Milwaukee & St. Paul Railway Company?

A.—Yes, sir.

Q.—And when the St. Paul company wants supplies for its South Dakota lines, it asks for them?

A.—Yes, sir.

Q.—And if it charged anything, it would be charging itself and paying itself?

A.—Yes, sir.

Q.—Which would be an absurdity on the face of it, would it not?

A.—Yes, sir; a farce, certainly.

Take the fact as it now stands. This coal is worth 85 cents at the mines, and complainant in its own records figures it at $1.60 a ton in South Dakota. This would indicate an allowance of 75 cents a ton for freight, which probably covers the cost of delivery at the state line.

We figure 42,418 tons of coal at $1.60 a ton, making the total for this item $67,868.80.

With the exception of the tax item the remaining items are small and unimportant.

Mr. Earling's estimate amounts to $1,520,309.92, and is just equal to $1.195 per train mile.

On page 31 of the annual report for 1897 we find that the operating expenses on complainant's railway system for 1895 were 87.94 cents per train mile; 1896, 88.29 cents, and 1897, 87.63 cents per train mile.

How is it that Mr. Earling can make out a greater expense per train mile for South Dakota than the average upon the system?

The expense of maintaining the roadway is much less. The rail wear is less. The freight trains are composed of fewer cars, carrying less tonnage and pulled by lighter engines. The passenger trains are lighter, only one sleeping car in the state. Yet Mr. Earling's estimate is 31.5 cents per train mile higher for South Dakota than the average on the system.

The testimony on this issue is far from satisfactory. Wherever we have had the data to test Mr. Earling's estimates we have found them to be exhorbitant and unreliable. In every case where we have secured the records of complainant giving the actual expenditures,

we have found the expenditures to be very much less than Mr. Earling states it to be.

We cannot with any degree of certainty say what are the annual expenses of complainant in operating the South Dakota lines.

The Circuit Court finds, in its decree in this action: "That this Court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896 and 1897 was." (Page 963).

This finding is challenged by appellant. We submit that it is impossible for the Court to determine, from the evidence, the annual cost of maintenance and operation with any degree of certainty.

We have before us three sets of figures, as follows:

Mr. Earling's estimate of $1,520,309.92.

Mr. Winnie's estimate of $1,111,394.72.

Defendant's estimate of $1,000,878.44.

Mr. Earling's estimate is certainly exhorbitant and unreliable.

Mr. Winnie's estimate is the result of multiplying the South Dakota train mileage by the average cost per train mile on complainant's system of railway, and thus charges South Dakota lines with a maintenance and traffic as expensive as the main lines, while the record discloses that South Dakota lines are not so well main-

tained and the trains and traffic are much lighter than the average on the system.

Defendants' estimate is not actual, but is the result of an analysis of Mr. Earling's testimony.

With the burden of proof resting on the complainant and every reasonable doubt being resolved in favor of the defendants, and considering that it was the duty of complainant to show the actual facts by satisfactory evidence and that such duty has not been performed in good faith, we feel justified in asking the Court, for the purposes of this case, to accept our estimate.

The following table shows the expense, as estimated by Mr. Earling, as estimated on train mileage basis, and as estimated by us on behalf of defendants.

The train mileage is estimated in this way: We find that the train mileage in South Dakota amounts to 1,272,542 miles and is equal to 6.0027 per cent. of 21,-199,446 miles, the total train mileage of the system.

We then take the items of expense on the system as stated on page 26 of the annual report for 1897, and applying this percentage we get the result shown by the table.

Under the the item, "Administration," we have included the several items mentioned by Mr. Earling under this head.

Our estimate on train mileage basis does not correspond exactly with the figures given by Mr. Winnie. His figures are $1,111,394.72, while our total is $1,092,075.55. This difference is due to the fact that Mr. Winnie included all the expenses of the system, while we for the sake of uniformity and comparison have only included the items named in Mr. Earling's estimate. The variance is less than $20,000 and, therefore, of no great importance.

THE SEVERAL ESTIMATES OF THE OPERATING EXPENSES, SOUTH DAKOTA.

	EARLING'S.	TRAIN MILEAGE.	DEFENDANTS'.
1. Repairs of track	$261,143 47	$107,346 04	$201,143 47
2. Renewal of rails	157,930 97	40,894 85	15,779 52
3. Renewal of ties	206,596 00	49,811 65	40,486 39
4. Repairs of bridges	56,445 27	40,897 43	56,445 27
5. Repairs of fences	11,307 60	2,921 62	2,071 54
6. Repairs of buildings	50,630 30	18,342 62	28,218 80
7. Repairs of locomotives	48,602 23	57,348 92	31,050 02
8. Repairs of cars	59,370 17	85,932 56	59,370 17
9. Repairs of tools	2,492 01	3,675 37	2,492 01
10. Administration	51,918 41	59,078 89	51,918 41
11. Station service	98,907 30	155,725 23	98,907 30
12. Conductors, baggagemen and brakemen	95,345 49	89,893 85	95,345 49
13. Engineers, firemen and wipers	100,575 95	106,958 83	100,575 95
14. Train and station supplies	23,711 11	24,594 95	23,711 11
15. Fuel consumed	229,839 45	107,938 71	67,868 80
16. Oil and waste	6,996 88	6,099 98	6,996 88
17. Personal injuries	1,343 34	8,185 55	1,343 34
18. Damage to property	1,617 59	1,386 55	1,617 50

19. Loss and damage baggage and freight	3,630 34	4,183 68	3,630 34
20. Taxes	98,482 68	98,482 68	98,482 68
21. Insurance	8,460 94	5,475 51	8,460 94
22. Mileage of cars	4,100 02	12,621 10	4,100 02
23. Sleeping car expenses	862 49	4,279 18	862 49
Total	$1,520,309 92	$1,092,075 55	$1,000,878 44
Expenses per train mile (cents)	119 4	85.8	78.6

It will be noticed that Mr. Earling's excess over the train mile estimate is gained largely on the items of repairs of track, renewal of rails, renewal of ties, and fuel consumed. On these four items he exceeds the train miles as follows:

Repairs of track	$93,797.43
Renewal of rails	117,036.12
Renewal of ties	156,784.35
Fuel consumed	121,900.74
	$489,518.64

We have demonstrated that these items depend upon the number and weight of the trains, and therefore Mr. Earling must be mistaken in his estimate. Mr. Earling's estimate amounts to 119.4 cents per train mile; at this rate the expense on the complaintant's system of road would amount to $25,312,138.52, instead of $18,577,539.08.

Distribution of Operating Expenses.

The first distribution will be as between the freight and passenger service. This distribution will be made largely on the train mileage basis.

Exhibit 34, page 610, shows the train mileage as follows:

EXHIBIT 34 (Defendant's.)

Revenue Train Mileage—Year ending June 30th, 1897:

	Entire System	South Dakota
Freight trains	12,387,036	589,924
Passenger trains	7,819,919	435,717
Mixed trains	992,511	246,901
Revenue trains	21,199,446	1,272,542

Is is usual to count 25 per cent. of the mixed train mileage as passenger and 75 per cent. as freight, and we find that Mr. Winnie has done so in making his estimate.

In this case, however, we mean to charge up to the freight traffic all that can possibly be charged to it to the end that there can be no possible question but what the freight service is charged with all that it should be.

While there at first appears to be some reason for charging the passenger service with a share of the mixed train expense, yet the passenger earnings on the mixed trains can hardly amount to 25 per cent. of the total earnings of such trains, while the expense of running such trains is not materially increased by the fact that a few passengers are carried in the caboose.

As a compensation for this passenger earning by the freight department we find that the passenger department transports the employes of the road, carries all the newspaper men who have advertising mileage, and

in many ways performs service for the benefit of the entire traffic for which it receives no credit or compensation.

In any event none of the expense is omitted, it is included either as freight or passenger expense.

Accordingly we find that the 1,272,542 miles consist of 836,825 freight train mileage and 435,717 passenger train mileage.

On this basis we find that 65.76 per cent. of the mileage is freight and 34.24 per cent. is passenger.

To avoid carrying the fractions we will use the even figures, 66 per cent. and 34 per cent. in our comparison.

These percentages are used in apportioning all the items except fuel for locomotives, and conductors, baggage and brakemen and repairs of cars. It appears from the testimony that the freight train locomotives consume nearly two times as much coal per train mile as the passenger locomotives. It also appears that the trainmen on the passenger trains run nearly two times as many miles for a month's wages as the freight trainmen. On this basis we find that 21 per cent. of the fuel and trainmen's wages should be charged to passenger service and 79 per cent. to freight service. The car mileage item is exclusively freight and sleeping car expense is exclusively passenger expense.

We apply the distribution to the three estimates and the following table shows the result:

DISTRIBUTION OF OPERATING EXPENSES AS BETWEEN THE FREIGHT AND PASSENGER SERVICE

		FREIGHT			PASSENGER		
		Earling	Train Mileage	Defendants	Earling	Train Mileage	Defendants
1	Repairs of track	$132,754.70	$70,848.39	$132,754.70	$68,388.77	$36,497.65	$68.388.77
2	Renewal of rails	104.234.45	26,980.61	10,414.49	53,696.52	13.904.24	5,365.03
3	Renewal of ties	136,353.36	32,875.69	26,721.02	70.242.64	16,935.96	13,765.37
4	Repairs of bridges	37 253.88	26,992.31	37.253 88	19,191 39	13,905 12	19,191.39
5	Repairs of fences	7,463 02	1,928.27	1,367 22	3 844.58	993.35	704.32
6	Repairs of buildings	33.416.00	12,106.14	18,624.41	17,214.30	6,236.48	9,594.39
7	Repairs of locomotives	32,077.48	37,850.28	20,493.02	16.524.75	19,498 64	10,557.00
8	Repairs of cars	35,576.91	56,715.48	35,576.91	23,793.26	29.217.08	23,793 26
9	Repairs of tools	1,644.73	2,425.74	1,644.73	847 28	1,249.63	847.28
10	Administration	34,266.16	38.991 95	34.266.16	17,652.25	20,086.94	17,652.25
11	Station service	65.278.82	102,778 65	65,278.82	33,628 48	52.946.58	33,628.48
12	Conductors, baggagemen and brakemen	75 322 94	71,016 15	75.322.94	20,022.55	18,877.70	20,022.55
13	Engineers, firemen and wipers	66,380.13	70,592.82	66.380.13	34,195 82	36,366.01	34,195.82
14	Train and station supplies	15,649 34	16,232.66	15,649 34	8,061 77	8,362 29	8,061.77
15	Fuel consumed	181,573 17	85,271.59	53 616.36	48 266 28	22,667.12	14,252.44
16	Oil and waste	4,617.95	4,025.98	4,617.95	2 378 93	2,074 00	2,378.93
17	Personal injuries	886 61	5,402.46	886.61	456 73	2,782.89	456.73
18	Damage to property	1,067.55	915.12	1,067 55	549.95	471.43	549.95
19	Loss and damage baggage and freight	2,396 03	2,761.22	2,396 03	1 234.31	1,422.46	1.234.31
20	Taxes	64,998.57	64,998.57	64,998.57	33,484.11	33,484.11	33,484.11
21	Insurance	5,584 33	3,613 83	5.584 33	2,876.61	1,861.68	2,876.71
22	Mileage of cars	4,100.02	12,621.10	4,100.02	.....	.....	.....
23	Sleeping car expenses	.....	.....	.....	862.49	4,279 18	862 49
		$1,042,891.16	$747,955.01	$679,015.06	$477,413 76	$344,120.54	$321,863.38
	Average per train mile (cents)	124.62	89.38	81.14	109 56	78 97	73.88

Distribution of the Operating Expenses as between the Inter-State and Local Freight Traffic.

This brings us to the most important proposition in this case.

We have found that the expenses chargeable to the freight traffic amount to $679,015.06.

How much of this should be charged to local and how much to inter-state freight?

Three methods of disposing of this question have been suggested:

1st. By a system of percentage based on the relation of expenses to earnings.

2nd. On the basis of the dollars earned.

3rd. On the basis of the tons hauled.

We will discuss and apply these three methods.

Complainant insists upon solving the proposition by the first method. They first offered testimony tending to show that it cost at "least twice or three times as much to do the local business as it does to do the through business." (Mr. Earling, page 236).

Complainant then offered testimony tending to show that the average cost of operation on the system was 60 per cent. of the earnings, and that on this basis the cost of local business would be 85 per cent. of the earnings on local business. Counsel for complainant, in their brief in the Circuit Court (we have not yet received their

brief in this Court), on page 20, state the proposition as follows:

"Having established that it costs at least 85 per cent. of the entire local earnings to pay the local operating expenses, and having learned the exact percentage of reduction in freight and passenger earnings made by the proposed schedule, it is easy to apply these percentages to the business and to learn therefrom the exact effect of the proposed schedule upon complainant's earnings in South Dakota. The cost to complainant for local operating expenses being at least 85 per cent., it follows that, for every $100 earned, $85 has been expended in earning it. Now, if the earnings from freight be reduced by the schedule 17.44 per cent. (as the evidence conclusively shows they are), then it follows that for each $100 earned under the existing schedule, there would be earned $17.44 less, or only $82.56."

At first glance, it would seem that this method has received the approval of this court by reason of the fact that the Nebraska case was disposed of on some such basis.

A careful examination of the Nebraska case leads us to the conclusion that this was the only method presented to the court, and that the data before the court practically limited it to this method, and the opinion is silent on the question of how to determine the sum to be charged against local traffic on account of expenses

of operation, interest and dividends. The only deduction we are able to make from the opinion as a whole on this question is that it must be calculated without reference to the inter-state business done by the carrier, or the profits derived therefrom.

The United States Circuit Court in North Dakota disposed of the North Dakota maximum rate case upon this method of percentages.

This judicial recognition of this method makes a careful examination and analysis necessary.

Our first criticism of this method is the hypothetical proposition on which it rests. If it costs 60 cents to earn a dollar as an average proposition, how much would it cost to earn a dollar on local traffic? The expert witness answers, "85 cents."

This expert opinion is then taken as the basis for further computation, regardless of the fact that the fact itself is definitely ascertainable.

This hypothesis rests upon the assumption that revenues and expenses are interdependent.

Let us apply this proposition to the facts in this case and see what will be the result.

We have the following testimony, showing the tonnage in South Dakota, (pages 608-610):

Q.—Mr. Winnie, have you prepared a statement showing the tons of freight moved in South Dakota,

both local and inter-state, for the month of September, 1896?

A.—I have, sir.

Q.—How does that month compare with the other months as to being an average month for the year 1897?

A.—It is very nearly an average month.

Q.—As nearly as could be obtained?

A.—As nearly as could be obtained; yes, sir.

EXHIBIT 33 (Defendants).

Chicago, Milwaukee & St. Paul Railway Co.'s Line in South Dakota—Freight Statistics, month of September, 1896:

	Local.	Inter-State.	Total.
Tons of freight moved.....	2,815	105,549	108,364
Tons one mile.....	182,918	7,860,982	8,043,900
Average haul, miles.....	65	74	74

Multiply by 12 and we have the annual tonnage for the fiscal of 1897, as follows:

	Local.	Inter-State.	Total
Tons of freight moved.....	33,780	1,266,588	1,300,368
Tons one mile.....	2,195,016	94,331,784	96,526,800

The operating expenses chargeable to freight traffic divided by the total tons hauled one mile gives us the average cost to move one ton of freight one mile in South Dakota, as follows:

On Mr. Earling's estimate, 1.08 cents.

On train mileage estimate, .77 cents.

On defendant's estimate, .70 cents.

Complainant has proven in this case that all freight business in South Dakota is local in its nature and that the increased cost of local freight applies to the entire tonnage, without regard to its being either local to the state or inter-state business.

On this proposition Mr. Earling testifies as follows, (page 241):

Q.—Now, I will ask you to state, Mr. Earling, whether the freight trains conducting the business of this company in South Dakota are properly classed as local trains or through trains?

A.—They are all local trains. Occasionally, however, during the fall months when there is some live stock moving from Chamberlain, which comes from across the river, and when grain is moving freely, we sometimes have a full train out of Eureka, and we have occasionally a full train of stock out of Chamberlain; but that happens only occasionally during the three fall months, say, September, October and November.

Q.—The freight trains in South Dakota, whether they are engaged in an exclusive local business or are carrying what is know as inter-state traffic, are all operated in the manner that local trains are operated and must be so for the reasons you have given?

A.—It must be so, because there is not sufficent traffic to run through trains, except the instances I have stated that occur in the fall months, occasionally with

wheat from Eureka, and occasionally with stock from Chamberlain. I will state further that as the freight is concentrated at Aberdeen, from the various lines running into Aberdeen, we get full trains out of Aberdeen eastward, that is, we get full trains during the time the grain is moving for the three months I have mentioned.

Q.—While a local train, whether it has some through business or not, is a train that stops either to take on or let off freight?

A.—That is correct.

Q.—You have stated that it costs two or three times as much in proportion to the earnings derived from the traffic to conduct local business than it does to conduct through business. Is that estimate fairly applicable to the business of the South Dakota line, as compared with the system as a system?

A.—It is a conservative statement, I should say. We have kept some statistics to show what it costs for the wages of engineers and firemen, the wages of conductors and brakemen, the cost of fuel, and the cost of supplies for locomotives and caboose cars; and those items only, nothing else entering into it, to haul 100 tons of freight one mile. These statistics show that on the line extending from Mitchell to Sioux City, it cost during the month of December, 1897, for those items which I have mentioned, *23.88 cents to haul 100 tons of freight one mile,*

Mr. Harrahan of the Illinois Central testified concerning this question as follows, (page 597).

Q.—In speaking of your line into Sioux Falls, I understood you to say that all the business upon that line was, in its character, local.

A.—Practically so. Of course, there is a little through business into Sioux Falls. It is practically so.

Q.—So that the figures which you have given us, relative to that line, would be an example of a line doing nothing but a local business?

A.—Practically a local business.

Q.—The fact that the line of road crosses the state line does not change the problem?

A.—Not unless the other conditions change.

Q.—If the business of the Chicago, Milwaukee and St. Paul Railway Company in South Dakota was that of gathering freight in that state to be shipped east, and of distributing freight shipped to that state from the east, the fact that it may have originated in Chicago and have been hauled 500 miles before reaching the state would not relieve it of that character of local freight until it reached the point where the distribution began, or where the gathering ceased?

A.—That is what we call local freight, when you commence to distribute at any point. For instance, we load a car for points on the Sioux Falls branch. That would go on a through train from here to Cherokee, Iowa, and

then be taken on a local train and be distributed at five or six or whatever number of stations there is, to be unloaded between there and Sioux Falls. That is what we call local freight. The same is true in the other direction. We start with one or two cars of freight and stop at various stations and pick up corn and wheat and other freight until we get to Cherokee, Iowa. There it is put in a through train and goes through to Chicago or St. Paul or Minneapolis in through trains. That is what we call local and through business.

Q.—So that you understand the proposition clearly, when this freight is gathered up between Sioux Falls and Cherokee, the fact that it be destined for Chicago, or some other distant point, does not divest it of its local character until it reaches Cherokee?

A.—Yes, sir; until it is put in the through train. It is billed at the various station where it is picked up through to its destination at Chicago, if it is coming here or going beyond.

So that by the testimony of these expert witnesses we are not to multiply this average cost in South Dakota by the "two or three times" theory because the inter-state and local freight is hauled on the same trains and under the same conditions and at the same expense per ton.

Hence, we multiply the local tonnage, 2,195,016 tons one mile by the average cost per ton mile and we have

the following result as the cost of handling the local freight:

On Earling's estimate $23,706.17
On train mile estimate 16,901.62
On defendant's estimate 15,365.11

Now, let us apply the 85 per cent. theory. The revenue from local freight is stated at $102,289.23; 85 per cent. of this sum is $86,945.84. That this is the contention of complainant is fastened beyond question by the statement in the brief of counsel that the revenue from local business for 1897 was $102,289.23; that the cost of earning this money was 85 cents on the dollar, and hence the net revenue was only $15,343.38.

If it cost $86,945.84 to haul 2,195,016 tons one mile, the average cost per ton mile would be 3.96 cents.

Deduct this $86,945.84 from the total freight expense and we have left as the cost of inter-state freight the following:

On Earling's estimate $955,950.32
On train mile estimate 661,009.17
On defendant's estimate 592,069.22

These sums divided by the inter-state tonnage gives the cost of interstate freight per ton mile as follows:

On Earling's estimate ..... 1.01 cents
On train mile estimate ..... .70 cents
On defendant's estimate ..... .63 cents

This shows as the result of the 85 per cent. theory

that the inter-state freight has cost on Earling's estimate 1.01 cents per ton mile and the local freight has cost 3.96 cents per ton mile; yet these 85 per cent. expert witnesses testify that under the conditions existing on complainant's lines in South Dakota there is no difference in the cost of transporting local and inter-state freight.

On this 85 per cent. theory it costs 3.96 cents per ton mile to transport local freight, and it costs just the same to transport inter-state freight; hence, if the position is tenable, then it has cost complainant $3,717,537.64 to transport its 94,331,784 tons of inter-state freight one mile. Add to this the $86,945.84, cost of local freight, and we have $3,804,483.48 as the total cost of transporting freight in South Dakota.

We can take Mr. Earling's estimate of actual expenses, amounting to $1,042,891.16 on the freight, and apply his "two to three times" theory and yet not equal the expense as figured on this 85 per cent. theory.

The error in this 85 per cent. theory is this: The deduction is based upon an average expense of 60 cents as compared with an average revenue of $1.00. These averages have been obtained from transactions equaling one cent a ton mile freight revenue, and .6 of a cent a ton mile freight expense. For instance, the complainant's revenue from freight for 1897 was 1.008 cents per mile. Its operating expenses were 60.94 per cent. of its revenue. (Page 31, 1897, annual report).

Now it is conceded that the local traffic costs more than through business, but this increased cost does not apply to all the items in the list of operating expenses. For instance, local freight does not increase the president's salary, nor the rail and tie renewal, nor the taxes; but this increased cost applies more directly to train expense, and when these witnesses say that it costs three times as much to haul local freight, they have reference only to train expense.

For instance, Mr. Truesdale of the Rock Island Railway testifies, (page 327):

Q.—If 60 per cent. was a fair percentage for the operating expenses of a railway system situated as the St. Paul is, what in your judgment, would be about the percentage of operating expenses to earnings of the lines in South Dakota, considering the difference between local business and the business of the system as a whole?

A.—The item of expense would be relatively greater in South Dakota, as I explained this morning. Briefly, the expenses of transportation, the business being largely local, as against a great percentage of the business of the lines of the St. Paul road being through business, and figuring that the transportion expenses average generally somewhere between 30 and 33⅓ per cent. of the total expense, I think that is not very wide of the mark, I should think the percentage of gross earnings in

South Dakota, would be somewhere in the neighborhood of 85 or 90 per cent.

And again on page 332:

Q.—When you assume the operating expense would be about 85 to 90 per cent., what would that be 85 or 90 per cent. of?

A.—Such gross earnings as would fairly be apportioned to it, in the adjustment of its account, if separate accounts were kept between South Dakota lines and other lines.

Q.—Upon what basis of division of those earnings?

A.—I should say upon a mileage basis; I do not see any other you could use, in determining the relative earnings of a system of road like the Chicago, Milwaukee and St. Paul Railway, located in several states.

Q.—So your position is that, according to your best judgment, the operating expenses in South Dakota would be from 85 to 90 per cent. of the earnings from operation, based upon a division upon the mileage basis?

A.—Well, I took the earnings and relative operating expenses of the system as a whole, giving the earnings on a mileage basis. I understand that is the way the earnings have been apportioned, and figuring on that basis, and assuming a large percentage of the South Dakota business is local business, which I understand is the case, in my judgment it would figure in that way.

Q.—Now, if the earnings on operation on the mileage

basis was $1,000,000 per annum, you would say the operating expenses would not exceed $850,000 to $900,000?

A.—I figured it on an estimated basis, as I say.

On this basis, as outlined by Mr. Truesdale, about 20 cents of this 60 cents' expense to earn $1.00 is transportation expense. For local freight we figure two to three times this 20 cents, making according to his testimony 85 to 90 cents, or as he put it 85 to 90 per cent.—85 or 90 per cent. of what? Why, it could only be of this average one cent per mile. This would give us the expense of handling local freight—at from .85 to .90 cents per ton mile and comes very close to our estimate.

The revenue from local freight is $102,289.23. Divide this sum by the local tonnage, 2,195,016 tons one mile, and we have a revenue of 4.66 cents per ton mile.

Now, if we apply this percentage to the actual revenue without regard to its being higher or lower than the average from which the percentage has been deduced, we make the error leading to the results we have been illustrating.

Eighty-five per cent. of the 4.66 cents revenue gives an expense of 3.96 cents per ton mile whereas we have demonstrated that allowing Mr. Earling's high estimate of operating expenses the expense does not exceed 1.08 cents per ton mile.

In the North Dakota case the Court found that the operating expenses of the Northern Pacific averaged

68.84 per cent. of its revenues. That the extra cost of local business was 31.41 per cent., and that the total cost of doing local business was 100.25 per cent. That the reduction of 13 per cent. reduced the revenues to 87 leaving a deficit of 13.25.

The result of this figuring is this: The Court has taken the hypothetical case that an average expense of 68.84 produced an average revenue of 100. That having relation to these figures, the local business cost 100.25, but the Court has failed to find how much the revenue from local freight exceeds the average 100.

In other words, the Court has advanced the cost from the average of 68.84 to the actual of 100.25, but failed to advance the revenue from the average of 100 to the actual, which in our case would be 4.66.

In our case the proposition would be that it costs on an average for one hundred miles 60 cents a ton. That the average revenue is $1.00. That it costs 85 cents to haul a local ton 100 miles. This would be all the data required by the North Dakota "formula," and we would simply apply the proposed reduction of 17 per cent., thus reducing the revenue to 83 cents, and figure out a deficit of 2 cents. We have found, however, that the revenue from local business would be $4.66 for the hundred mile haul and that instead of a deficit there would be a profit, after applying the 17 per cent. reduction, of $3.02.

In the Nebraska case the Court finds that the Burlington hauled (1893) 93,703,675 tons local freight one mile at an expense of $938,147. This amounts to one cent a ton per mile. This seems like a fair statement of the cost of local business, but we can not understand the revenue side of the proposition in the Nabraska case.

It appears that the revenue on the 93,703,675 local tons one mile was $1,242,416.00. This would amount to 1.32 cents per ton mile.

It appears that the revenue on the 357,131,753 inter-state tons one mile was $4,730,940.00. This would amount to 1.32 cents per ton mile.

Divide the local tons one mile by the local tons carried and we have an average local haul of 160 miles. Divide the inter-state tons one mile by the inter-state tons carried and we have an average inter-state haul of 160 miles.

The revenue from the local tons is stated as being $2.13 per ton, and by computation we find the revenue per ton of inter-state freight to be $2.13.

Thus it is made to appear that the revenue derived from local and inter-state business, per ton mile, is identical.

We find that according to Mr. Dilworth's tables, each of the roads are hauling local and inter-state freight for exactly the same average distance and for the same average revenue per ton and per ton mile.

It is impossible that any such conditions exist in Nebraska, and hence we are led into an investigation of Mr. Dilworth's tables.

Mr. Dilworth, in his testimony, does not give the formula by which he prepared those tables, but it would seem that he has taken the total freight revenue, divided it by the total tons hauled, thus getting the average revenue per ton.

Now, from what we know of the reports on file with the commissioners, or board of transportation, he would have no data which would tell him how many tons of the total tonnage were tons of local freight or tons of inter-state freight, and Mr. Dilworth admits this in his testimony, (page 656 Nebraska case.) The figures contained in these tables are the same that would be obtained by dividing the local freight revenue by the average revenue per ton and setting down the result as the actual number of tons of local freight.

(In making comparison we will use the Burlington for 1893.) That is to say we first divide the total revenue, $5,973,356, by the total tons 2,804,299 (local 583,294, through 2,221,005) thus finding the average revenue per ton hauled to be $2.13. We then divide the local revenue, $1,242,416, by this average of $2.13 and we get 583,294 as the number of tons of local freight. We find on page 331 Inter-state Commerce Commission statistics of railways for fiscal year ending June 30th, 1893, that

the Burlington (C., B. & Q. west of the Missouri river) reports its average revenue per ton mile on all freight traffic to be 1.325 cents. We assume that the reports which Mr. Dilworth refers to show the same figures. Divide the average revenue, $2.13 by the average per ton mile 1.325 cents, and we have an average haul of 160 miles. Divide the local revenue, $1,242,416, by the ton mile, 1.325 cents, and we have 93,767,245 as the tons hauled one mile. These last figures do not agree exactly with Mr. Dilworth's estimate of 93,793,675, but are very close.

From the foregoing it will be seen that the only actual data contained in Mr. Dilworth's tables is the revenue from local and inter-state freight, and that the tonnage figures both as to tons hauled and tons one mile are the result of averages and therefore fictitious. It is impossible to determine from those tables the actual local tonnage and consequently we can not ascertain just what service was actually rendered to earn the $1,242,-416 of local freight revenue.

The result was that the question of local freight earnings was disposed of on the basis of an average operating expense raised 10 per cent. to make it actual, and applied against an average revenue.

When we consider these facts we can understand the eagerness of the roads to accept and stand on Mr. Dilworth's tables.

We find that Mr. Taylor, the auditor of the Burlington, testified (pages 270, 271) that for the year 1892, the freight revenue in Nebraska averaged 1.332 cents per ton mile, while the local freight revenues averaged 2.079 cents per ton mile. If we divide the local revenue (for 1892 as stated by Mr. Dilworth) $1,237,884 by the local tons one mile, 91,139,965, we get an average revenue of 1.35 cents per ton mile.

Assuming that the auditor has correctly stated the local revenue at 2.079 cents and divide the total local revenue by this rate per ton mile we get 59,542,150 as the local tons one mile, showing a much less service to earn the revenue than that shown by Mr. Dilworth's tables of 91,139,965 tons one mile.

We have not the data with which to work out the actual figures on local freight in Nebraska and compare them with the figures in Mr. Dilworth's tables, but to show the extent of the error in accepting those tables as actuals instead of averages, we will now apply Mr. Dilworth's method to the facts in the case at bar and compare the results with what we know to be the actual facts.

The total freight traffic in South Dakota amounted to 1,300,368 tons hauled an average distance of 74+ miles, and equals 96,526,800 tons one mile.

The total freight revenue was $1,074,741.86 (page 25), or 82.6 cents per ton and 1.11 cents per ton mile.

We divide the local revenue, $102,289.23 by the average revenue of 82.6 cents per ton and thus get 123,836+ tons of local freight. Divide the $102,289.23 by the 1.11 cents per ton mile and we get 9,215,245 tons one mile. We divide the inter-state revenue, $972,452.63, by the average 82.6 cents and we get 1,177,303 tons hauled. Divide $972,452.63 by the 1.11 cents, we get 87,608,345 tons one mile. The actual figures for these several items have been shown to be as stated in the following comparative tables. The comparison is as follows:

	Local Tons.	Inter-State Tons.	Local Tons 1 mile.	Inter-State 1 mile.
Dilworth's method...	123,836	1,177,303	9,215,245	87,608,345
The actual figures....	33,780	1,266 588	2,195,016	94,331,784

	Local Revenue.			Operating Expenses.		
	Total.	Per Ton.	Ton Mile.	Total.	Per Ton.	Ton Mile.
Dilworth's method	$102,289.23	$ .826	1.11	(1) $73,709 53	59.5	.79
The actual facts...	102,289.23	3.02	4.66	(2) 25,352.43	75.5	1.155

(1) Estimated at 65.51 per cent. of revenue with an additional 10 per cent. for increased cost of local freight, same as Burlington for 1893.

(2) Estimated on train mileage basis and Truesdale's formula for increased cost of local freight.

	Net Profit.		
	Total.	Per Ton.	Per Tn mile.
Dilworth's method	$28,579.70	23.1	.32
The actual facts.....	76,936.80	226 5	3.505

If there still remains a doubt as to Mr. Dilworth's tables being constructed from the averages on the several lines of railway that doubt will be dispelled by consulting the Inter-state Commerce Commission's railway statistics for the years 1891, pages 342-3; 1892, pages 320-1; 1893, pages 330-1.

Take the average revenue per ton mile as stated in these reports and divide the local revenue as stated by Mr. Dilworth, and you will have the tons one mile as stated in his tables, with only such slight differences as result from the fact that Mr. Dilworth has ascertained the local earnings by saying that they were a certain per cent. of the total. (See last question and answer of Mr. Dilworth, page 653 Nebraska case) and unless he has carried out the fractions on his percentage to three or four decimals he would not be exact.

Then again the result will be varied a little by the fact that Mr. Dilworth's revenue corresponds with item 11, while the ton mile revenue is calculated on the revenue stated in item 9 of the report. Take the case of the C. St. P. M. & O. R'y, where the report covers only the lines in Nebraska and the facts are more easily developed than on the Burlington which covers lines in other states and which are not included in Mr. Dilworth's estimates.

It will also be noticed that the average haul on the Burlington and the C. St. P. M. & O. R'ys are indentical, 160+ miles, yet the average revenue per ton mile on the Burlington is 1.325, while the other is only .933. This is due to the fact that the Burlington hauls a greater proportion of high rate local freight than the other company. The local freight could not have this influence if it were carried on the same basis of rates as the through freight.

The result of disposing of the Nebraska case on Mr. Dilworth's tables was that the Burlington was charged with $1,242,416 of revenue from local freight and was credited with the expense of having transported a local tonnage equal to one ton 93,793,675 miles, when in fact it had not transported any such quantity of local freight.

This is not intended as a criticism upon the disposition which the Court made of that case, because Mr. Dilworth's tables constituted the only data before the Court, while we have gone outside of the record to support our argument, something the Court was under no obligation to do, if indeed it had the right to do so.

We repeat our proposition once more.

The average revenue on freight is equal to 100 cents for one ton 100 miles. The average cost is 60 per cent. of the average revenue, or 60 cents for one ton 100 miles. One-third of this 60 cents is direct cost of transportation and this direct cost of transportation is increased two or three times in hauling local freight, so that the expense of hauling the ton 100 miles as local freight would amount to 85 or 90 cents, or 85 to 90 per cent. of the 100 cents average revenue.

We have now advanced the cost from the average of 60 cents to the actual cost of 85 to 90 cents, and in order to determine whether there is a profit or not we must advance the revenue from the average of 100 cents to the actual revenue of $4.66 for one ton 100 miles.

This is admitted by Mr. Truesdale in the following questions and answers, page 332:

Q.—When you assume the operating expense would be about 85 to 90 per cent., what would that be 85 or 90 per cent. of?

A.—Such gross earnings as would fairly be apportioned to it, in the adjustment of its account, if separate accounts were kept between South Dakota lines and other lines.

Q.—Upon what basis of division of those earnings?

A.—I should say upon a mileage basis; I do not see any other you could use, in determining the relative earnings of a system of road like the Chicago, Milwaukee and St. Paul Railway, located in several states.

Q.—So your position is that, according to your best judgment, the operating expenses in South Dakota would be from 85 to 90 per cent. of the earnings from operation, based upon a division upon the mileage basis?

A.—Well, I took the earnings and relative operating expenses of the system as a whole, giving the earnings on a mileage basis. I understand that is the way the earnings have been apportioned, and figuring on that basis, and assuming a large percentage of the South Dakota business is local business, which I understand is the case, in my judgment it would figure in that way.

Q.—Now, if the earnings on operation on the mileage basis was $1,000,000 per annum, you would say the op-

erating expenses would not exceed $850,000 to $900,000?

A.—I figured it on an estimated basis, as I say.

The witness does not say that the cost would be 85 to 90 per cent. of the $102,289.23 revenue from local freight, but that it would be 85 to 90 per cent. of all the business, to-wit: The total revenue of $1,074,741.86. This would mean that the freight would cost about $850,000 to $900,000. This is a little less than Mr. Earling's estimate, and a little more than our estimate, and considering that Mr. Truesdale was expressing an opinion and not testifying from positive knowledge he has come very close to the facts.

The Distribution on the Basis of the Dollars Earned.

To charge the local freight with its revenue share of the operating expenses we would figure as follows:

The total freight revenues on South Dakota lines amounted to $1,074,741.86, and the operating expenses are equal to:

On Earling's estimate, 97. cents per dollar of revenue.
On train mile " 68.9 " " " " "
On defendant's " 63.1 " " " " "

The revenue from local freight amounts to $102,289.23 and on this basis the local freight would be charged with operating expenses as follows:

On Earling's estimate, $99,220.65.

On train mileage estimate. $74,597.14.

On defendant's estimate, 67,816.21.

From what we have heretofore figured out it will be seen that these results are far from the real fact; not only this but we are confronted with the serious objection to this method that it violates the injunction of this Court in that the revenues from inter-state business have a decided influence on the result.

To illustrate, suppose the earnings from inter-state business should be increased by raising the freight rates 50 per cent. so that revenues from the same tonnage of inter-state freight would amount to $1,478,678 instead of $972,452. Then the inter-state $1,478,678 and the local $102,289 would amount to $1,580,967. This would amount, on Mr. Earling's estimate, to 65.9 cents per dollar of revenue, and would reduce the local freights share of operating expenses from $97,481.63 to $67,408.45 without any change whatever either in the tonnage or revenues of local freight.

On the other hand suppose a reduction of the inter-state freight rates of 25 per cent., so that the revenues would be reduced from $972,452 to $729,339, then the total revenues would amount to $831,628; and on Earling's estimate the operating expenses would amount to 125 cents to every dollar of revenue, and the local share would be $127,861.

Another serious objection to this method, is the dispute which would at once arise over the question of the share of the inter-state revenues to be credited to South

Dakota. We would at once contend that the total earnings are not properly stated by complainant, because they apportion the inter-state revenues on the mileage basis. They claim it costs three times as much to do the gathering and distributing part of the work of handling freight, and yet they only apportion to us a per mile share of the revenues arising from inter-state traffic.

The agreements between railway companies for division of joint freight earnings disclose the fact that among themselves by voluntary agreement they give more than a per mile share of the earnings to the road that does the gathering and distributing. We have here an inter-state traffic amounting to 1,266,588 tons hauled an average distance of 286.5 miles, 74 miles of which is in South Dakota and 212.5 miles on lines east of us. The total revenue derived from this business was $3,636,897.23 (page 787), of which $972,452.63 was apportioned to South Dakota. It amounts to $2.95 a ton, and 76.77 cents was South Dakota's share. We turn to the agreements for division of joint earnings and we find that for a haul of 74 miles or less on the road doing the local work and a haul of 212.5 miles or greater on the through line that the earning is divided on the basis of 40 per cent. to the local road and 60 per cent. to the through line. Apply this to the $3,636,797.32 and South Dakota would receive $1,454,758.88 instead of $972,452.63.

In this connection the following testimony of Mr. Chappel of the Alton railway becomes interesting, (pages 344-345):

Q.—Suppose that a train should start at a point 100 miles west of the east state line of the state of South Dakota and run as a local train to the state line, 100 miles, and should gather along the route twenty cars of wheat, making an average haul of fifty miles, and then the train should be taken from there to Chicago, a distance of 500 miles; that the earnings derived from the transaction would be $55 per car or $1,100 for the train; what would you say was an equitable division of those earnings?

A.—As between the 100 miles and the 500 miles?

Q.—Yes.

A.—The only recognized division is on a mileage basis.

Q.—What would you say was an equitable division?

A.—I think that is entirely equitable, it is considered so among railroad men, the nearest to a fair division that can be had.

Q.—That division would give $100 for the operation of the train 100 miles and would give the main line $1,000 for the operation of that train 500 miles?

A.—The return of the train another 500 miles; these cars have to go back.

Q.—That would not affect the relative value, would it?

A.—$2.00 per mile would be a good fair freight per mile, but you must run the train back.

Q.—The branch line has to haul the empties to the other end the same, so that the relative positions are the same?

A.—Certainly.

Q.—Would you say that was an equitable division of those earnings?

A.—That is the usual mode.

Q.—And the usual mode then would give $1,000 for a 500 mile haul on through freight as against $100 for a 100 mile haul on local freight?

A.—Yes; according to your figures.

Q.—And yet it seems to be conceded that the expense of operating the local freight is two and one-half to three times as great as the through freights?

A.—Yes, sir.

If the South Dakota division of the complainant's railway is doing the local gathering and distributing of an inter-state freight, the long through haul of which is over complainant's main lines outside of South Dakota, then South Dakota lines ought to be credited with such relative share of the earnings of such business as the value and character of such local service bears to the value and character of the entire service.

Complainant contends that its local rates in South Dakota are not high enough to yield an adequate compen-

sation for the transportation of local freight. If this is true, then certainly the South Dakota lines ought to be credited for the local haul of inter-state freight with a sum equal to the amount they would have received for a corresponding haul of freight local to the state.

This inter-state traffic in 1897 amounted to 1,266,588 tons hauled an average distance of 286.5 miles, 74 miles of which was in South Dakota. The revenue amounted to $3,636,897.23. By reference to "Exhibit 68," (page 801), we find that the local rate for 75 miles will average about 41 per cent. of the rate for 290 miles, hence if South Dakota lines are to be compensated for the local haul of inter-state freight they ought to receive 41 per cent. of the revenue derived from the inter-state traffic. This would amount to $1,491,127.86, whereas the amount on the mileage basis only amounts to $972,-452.63. This is very close to the division which the roads themselves make under their division agreements.

Thus we would at once be involved in a useless controversy because the cost of local freight can and ought to be determined without reference to the revenues. It has cost just so much to transport the tons of South Dakota freight and that cost is not in the slightest degree affected by the question of how much the complainant has received for transporting either inter-state or local freight. It is possible that the traffic manager would consider the cost of transportation in naming a

freight rate, but in view of the testimony of the traffic manager that he had been engaged in making rates for over 30 years and during that time had never had an opportunity of making a tariff on a basis of what the service was worth and never had an opportunity to determine the rate by the value of the service. *The rates are made what they must be. There is not a place on the St. Paul lines (C. M. & St. P. Ry) where the rates are made with reference to the value of the service to be performed* (191.) *They are not based upon the value of the service* (192.) Such a possibility is very remote.

Again, by this method, the larger the revenue from local freight the greater the burden imposed. We have found that the revenues from local freight now amount to 4.66 cents a ton mile; suppose complainant should double its local freight rates and charge us 9.32 cents a ton mile. The revenues would amount to $204,578 local, and $972,452 inter-state, making a total of $1,177,030, and the expense, on Mr. Earling's estimate, would be 88.6 cents per dollar of revenue. On this basis the local expense would amount to $181,-265.51.

It would be just as logical for us to insist that local freight should be hauled free because if there was no revenue there would be no expense.

The Tonnage Basis.

We insist that the only logical way of distributing

this operating expense as between the inter-state and local freight is to distribute it on the basis of the tons hauled. If a train runs 100 miles carrying 100 tons of freight, 97 tons of which are inter-state freight and 3 tons local freight, then the cost of operating such train should be charged 97 per cent. to inter-state and 3 per cent. to local, with such allowance for increased cost of local freight as the testimony may warrant. On this basis we determine the true cost without any entanglement with revenue propositions. It does not matter whether the company is carrying inter-state freight or local freight on a profitable or unprofitable scale of freight charges.

On this basis we find that the total tons one mile were 96,526,800. This makes an expense per ton mile of 1.08 cents on Mr. Earling's estimate, 77 cents on train mile, and 70 cents on defendant's estimate. Of this 96,526,800 tons one mile, 2,195,016 were local tons one mile. This multiplied by the cost per ton mile gives us:

On Earling's estimate	$23,706.17
On train mile estimate	16,901.62
On defendant's estimate	15,365.11

While the testimony shows that inter-state freight costs just as much as local, yet for the sake of being more than fair we will apply Mr. Truesdale's formula. That is, if the expense was 60 cents, he would increase it to 85 or 90 on local freight.

To increase it to 90 is to increase the 60 just 50 per cent., hence we find the cost of local freight to be:

On Mr. Earling's estimate	$35,559 25
On train mile estimate	25,352 43
On defendants' estimate	23,047 66

By this allowance we certainly have charged the local freight with all that complainant can possibly claim on any reasonable basis.

The distribution is now made on this basis and results as follows:

	Total.	Inter-State.	Local.
Earling's estimate	$1,042,896.16	$1,007,336.91	$35,559.25
Train mile estimate	747,955.01	722,602.58	25,352.43
Defendants' estimate	679,015.06	655,967.40	23,047.66

Interest and Dividends.

Complainant contends that its investment in South Dakota amounts, in round figures, to $20,000,000. That its annual interest charge is about 5.69 per cent., and on the entire capital would amount to $1,138,000 annually.

Our contention is that the complainant's property in South Dakota is not worth to exceed $10,000,000, and at the rate named, the annual interest charge would amount to $569,000.

What we have said about the distribution of the operating expenses applies with equal force to this interest charge or contribution to capital account.

Charging 66 per cent. to freight and 34 per cent. to passenger, we have the distribution as between these two departments of the service as follows:

	Freight.	Passenger.
On complainant's valuation.....	$751,080.00	$386,920.00
On defendants' valuation.....	375,540 00	193,460 00

If we now distribute the freights proportion between the inter-state and local on the basis of the tons hauled, we find that on complainant's valuation it amounts to .776 cents per ton mile, and on defendant's valuation it amounts to .388 cents per ton mile, and these figures multiplied by the local tons one mile gives us the following:

On complainant's valuation.....	$17,033 32
On defendants' valuation...	8,516 66

Complainant may contend that this interest charge should be apportioned on the revenue basis, but we must insist that complainant's exhorbitant charges for transporting local freight and thus securing a much larger revenue than it is entitled to ought not to furnish a basis or excuse for loading onto the local freight a correspondingly exhorbitant proportion of the burdens.

The local tonnage is 2.27 per cent. of the total tonnage in South Dakota, yet this local tonnage is made to produce 9.5 per cent. of the freight revenues. Then, again, if we proceed to distribute on the revenue basis, we are led into the difficulty of determining the amount of the inter-state earnings to be credited to South Dakota. Because complainant may have apportioned the inter-state earnings on the mileage basis

does not foreclose all inquiry into the reasonableness of such apportionment. Then, again, we are here to determine the issues in this case without being influenced by the amount of the inter-state earnings.

The result of our inquiry into the local freight issues in this case is now before us.

Final Result on the Freight Issue.

On the basis of complainant's contention we find that the local freights share of the operating expenses as estimated by Mr. Earling, and properly apportioned, amounts to $35,559.25. That of the interest charge on basis of complainant's valuation the local freight should be charged with $17,033.32, making a total charge against the local freight of $52,592.57. The revenues from local freight amount to $102,289.23. The proposed schedule would reduce the revenues 17.44 per cent., making a reduction of $17,839.24, leaving a revenue of $84,449.99. Deduct from this the total charges against local freight and we still have $31,857.42 to go to surplus.

On the basis contended for by defendants we find that the local freights share of the operating expenses, properly apportioned, amounts to $23,047.66. That of the interest charge on basis of defendant's valuation of complainant's property, the local freight should be charged with $8,516.66, making a total charge against the local freight of $31,564.32. Deducting this sum from the lo-

cal freight revenue and also deducting the amount of the proposed reduction, we have $52,885.67 to go to surplus.

This surplus is equal to 2.4 cents a ton mile, an amount per ton mile that is more than double the average revenue of 1.008 cents per ton mile on complainant's system of railway. To show the enormous proportions of this surplus, we find that if complainant had earned a surplus of 2.4 cents per ton mile on its entire freight traffic for 1897, its surplus would have amounted to the enormous sum of $52,637,785.92, or $22,000,000 more than its entire gross earnings, and sufficient to pay a dividend of 25 per cent. on its total capitalization. The revenue from local freight in South Dakota amounts to 4.66 cents per ton mile. If complainant had earned 4.66 cents per ton mile on its entire tonnage for 1897, its freight revenues would have amounted to $102,205,-034.32, a sum equal to 48 per cent. of complainant's total capitalization.

Counsel for complainant may point out places where we have criticised their estimates too harshly and perhaps may find here or there an errer in our estimates, but this will be of no avail because if we accept Mr. Whittemore's valuation and Mr. Earling's expense account there is still sufficient revenue from local freight to pay its fair proportion and leave a surplus over and above the allowance for the proposed reduction of $31,857.42.

Upon what theory is the complainant entitled to the verdict on this freight issue? In order to support such a verdict it will be necessary to sustain complainant's valuation of $20,000,000 and its expense bill of $1,520,309.92, and then it will be necessary to apportion this expense to local freight by that "two or three times 85 per cent. theory."

It has been suggested, and possibly complainant may, as a last resort, contend that it is impossible to determine the amount of operating expenses and fixed charges to be taxed up against the local freight.

This is simply an excuse to get away from the actual figures and get back to the percentage theories, and thus conceal the facts behind a confusion of percentages.

On the other hand, if it is true that the local and inter-state traffic is so interwoven as to be inseparable and that it is impossible to determine just how much of the value of the property and how much of the operating expenses and fixed charges are to be apportioned to local traffic, how is complainant, having the burden of proof, to show to the Court that any given rate for transportation of local traffic is not compensatory?

Even on the percentage theory, complainant cannot make out a case if the percentages are equitably worked out. For instance, Mr. Winnie testifies that for the year, 1897, the operating expenses in South Dakota

were 69.24 per cent. of the revenues. (Page 32). The total freight revenues were $1,074,741.86; 69.24 per cent. of that sum would make an operating expense of $744,161.26, or .77 cents per ton mile.

According to Mr. Truesdale's formula we increase this amount 50 per cent. for local freight, making it 1.155 cents per ton mile. Multiply this sum by the local tons one mile and we have an operating expense of $25,352.43.

Mr. Winnie's figures, of course, are on the train mileage basis. We have also made an estimate of operating expenses on the train mileage basis and have carried the estimate through the whole field of divisions, distributions and apportionments, and when we reached the final result, the amount of operating expenses to be charged against the local freight, we found the amount to be $25,352.43, coming out exactly with Mr. Winnie's figures.

This is a strong corroboration of our distributions and apportionments, and of our interpretation of Mr. Truesdale's formula.

In order that there may be no mistake about this local freight issue, we will go to the limit of complainant's contention.

We have found that on Mr. Earling's estimate, the average expense per ton mile was 1.08 cents and amounted to $23,706.17. Now multiply this by Mr.

Earling's "two or three times theory," say, two and one-half times, and thus fix the local freight expense at $59,265.42; add to this the interest charge estimated on complainant's $20,000,000 valuation, amounting to $17,033.32, and we have a total charge against the local freight of $76,268.75. The local freight revenues after deducting the amount of the proposed reduction amount to $84,449.99. So that even allowing the complainant's most exhorbitant claims, we yet have $8,181.12 to pass to surplus.

One of the contentions of the complainant in this case has been that the South Dakota lines have always been unprofitable and not self-sustaining.

In other words, that the acquisition of this property has proved to be a very bad investment. Now, what are the facts? According to complainant it has $20,000,000, or 9.4 per cent. of its entire capitalization invested in these South Dakota lines. It received during 1897, from local traffic $102,289, and $3,636,897 from inter-state freight originating or terminating on these lines of railway. This inter-state traffic consisted of 1,266,588 tons hauled an average distance of 74 miles in South Dakota and 212.5 miles outside of Dakota. Allowing the complainant .6 cents per ton mile for the haul outside of Dakota we would deduct $1,604,898 from the $3,636,897 and have $2,001,999 as the profit to complainant, making the local and inter-state freights worth $2,104,288 to the complainant.

Add to this the $412,950 of local passenger, express, mail and miscellaneous earnings and we have a total of $2,517,238 earned at an operating expense of not to exceed $1,000,000, leaving the net value of the Dakota lines to complainant at $1,500,000 annual net revenue, a sum sufficient to pay an annual dividend on the alleged valuation of $20,000,000 of 7.5 per cent., or 15 per cent. on the actual value of $10,000,000. The net revenues of the entire system are stated to be $11,909,228, and the cost of road at $212,594,714. This net revenue would pay an annual dividend of only 5.5 per cent., as against the 7.5 per cent. which the Dakota lines would yield.

We find that the total freight on this entire $212,000,000 of railway amounted, in 1897, to $22,104,802. We have found that the $20,000,000 invested in Dakota represent 9.4 per cent. of this $212,000,000, Now 9.4 per cent. of the total freight revenues amounts to $2,077,851. This would be the sum which the $20,000,000 should earn in order to earn its share of the $22,104,802. We have just seen that this $20,000,000 in Dakota has a freight earning value of $2,104,288, or $26,437 more than its proportion. Complainant may by some system of book-keeping figure out that the Dakota lines are not self-sustaining, but the foregoing analysis of the facts cannot be overcome. We are sustained in this by Mr. Chappel of the Alton railway, when he testified as follows, (page 344) :

Q.—Suppose that the total freight revenues of the Chicago, Milwaukee & St. Paul Railway system were $22,000,000 for the year ending June the 30th, 1897, and that of that $22,000,000, $5,000,000 was earned from business that originated or terminated upon this 17 per cent. of its lines?

A.—I should think the business would be of some value—some considerable value to the Chicago, Milwaukee & St. Paul system.

Q.—And that, while the earnings apportioned upon the mileage basis, would not cover the expenses of operating branch lines, yet considering the revenue to the system, you would say that it was a fair business proposition?

A.—It might be; I should think it would be.

How Freight Rates are Determined.

In the Nebraska case this Court defined the rule by which the reasonableness of a given freight rate should be determined and from the rule so laid down we find the issue to be, will the proposed schedule of rates yield to the carrier a fair return, over and above the cost of the service, upon the value of that which it employs in serving the public. This may be said to be the judicial formula for determining the value of the services of a public carrier when the state has sought to limit the tolls to be collected by such carrier.

The state does not assume to name the exact tolls to

be collected but simply names a maximum which is not to be exceeded by the carrier, and the carrier within the limits of such maximum, names the actual compensation for its services.

What are the considerations that influence the carrier in naming the rate? By what rule or formula does the carrier ascertain the rate to be charged? When the complainant constructed its eleven hundred miles of road into the Territory of Dakota and thus opened up a new railroad field, what data, rule or formula controlled the traffic manager as he proceeded with the task of prescribing a table or schedule of freight rates for their new line of railway?

We endeavored to elicit this information by cross-examination of the traffic manager, Mr. Bird. He has been engaged in naming rates on complainant's lines for over thirty years and if there is any definite rule or formula he certainly is familiar with it.

We quote his testimony on this proposition, (pages 190, 191, 192):

Q.—Let me ask you, Mr. Bird, suppose that your company should construct 1,000 miles of road in a new territory, as it did in South Dakota, and you were called upon to prepare a schedule of rates for that new territory, what data would you use, what foundation, with which to construct that schedule?

A.—I testified this morning that I had been in the

service somewhat over thirty years and had been engaged in making rates during that time, and I never have yet had an opportunity of making a tariff on a basis of what the service was worth. I have never had the opportunity to determine the rate by the value of the services. The rates are made what they must be. The rate on wheat from Duluth to Buffalo has a good deal to do with fixing the rate from any point on our road in the Dakotas to Chicago, Milwaukee, Minneapolis and other markets, and if I should undertake to tell you how we make rates to Chamberlain I would have to sit down with you with a map or diagram and go over the whole territory, but I say this, there is not a place on the St. Paul lines where the rates are made with reference to the value of the services to be performed.

Q.—Then it is simply a question of making the best rate you can, competition and other things being considered?

A.—Just exactly as those merchandise rates from Aberdeen and Sioux Falls to South Dakota stations; sometimes they are made by competition, people saying "We are ruined if you don't do it," and sometimes they state the case correctly and we try to make the rate to suit their case.

Q.—But in no case have you ever in your experience of thirty years been able to make a rate which would

yield what you would consider a sufficient return to reward the company for its services?

A.--I can say that I have not. The circumstances are as varied as one can imagine, where the rate is considered fair, and reasonable compensation. But you establish a general basis of rates, and it is the standard for your business. I do not recall a place where we have been able to make a rate with sole reference to the service.

Q.—Mr. Bird, has the character of the service anything to do with the making of the rate?

A.—I don't quite comprehend the drift of that question.

Q.—We will suppose that a line was served by two trains per day and another line was served by a train three times per week, would these facts have anything to do with fixing the rates to be charged?

A.—Well, I should have to answer that by going going back to my other answer, that as a general proposition the rates are made upon the basis of what the competition generally will permit, and they are not made upon the value of the services at all. They are not based upon the value of the services.

There is only one deduction to be made from this testimony and that is that the rates are determined by the sole question of how much can be charged and yet secure the business. This testimony is a confirmation of the popular idea that the railroads charge all the traffic

will bear. From this testimony we find that none of the considerations which compose the judicial formula enter into the traffic manager's solution of the problem. This being true, existing rates named by traffic managers can not be presumed to be reasonable nor can they be accepted as evidence of their own reasonableness; hence, we contend that the fact that the existing rates are higher and afford more revenue than the proposed schedule, can have no influence in a judicial investigation of the reasonableness of the proposed schedule.

Although Mr. Baird is a well informed, competent and experienced traffic manager and as well qualified to testify to the direct question as any person could well be, yet he has not testified that the proposed schedule would not afford a fair compensation, or that as a business proposition he could not accept the South Dakota business on the basis of the proposed schedule.

Upon all the facts brought to the attention of the Court can the Court now find, so far as this freight issue is concerned, that the Board of Railroad Commissioners by the promulgation of the proposed schedule of maximum freight rates are guilty of an abuse of the reserved powers to regulate these public corporations?

The Passenger Rates.

We have heretofore found that the share of the operating expenses chargeable to the passenger traffic in South Dakota was on a basis of:

Earling's estimate $477,413.76
Train mile estimate 344,120.54
Defendant's estimate 321,863.38

By Exhibit 8. page 25, we learn that the earnings for the years 1894, 1895, 1896 and 1897 were as follows: Local passengers, $905,737.01; inter-state passengers, $586,810.97; express, $251,828.93; mail, $484,444.11; miscellaneous, $99,328.01.

This makes an average annual earning of local passengers, $226,434.25; inter-state passengers, $146,702.74; express, $62,957.23; mail, $121,111.02; miscellaneous, $24,832.00, or a total average annual earning of $582,-037.24, all of which is local except the inter-state passenger. This would give the total local earnings, $435.-334.50, and inter-state $146,702.74.

In view of the fact that the inter-state earnings are apportioned to South Dakota on the basis of the local rate we can apportion the expenses on the revenue basis. That is to say, South Dakota lines have received exactly the same revenue for carrying inter-state passengers that they have for carrying local passengers.

On this proposition, Mr. Winnie testifies as follows, (page 575-6.)

Q.—Is it not a fact that all inter-state business is 4 cents per mile business?

A.—I understand that it is substantially so; yes, sir.

Q.—Is it a fact that all tickets sold from Chicago to

South Dakota points are sold upon a 4 cents a mile basis?

A.—I can't testify in regard to that. I am not familiar with the rates, personally. I understand that in the division of the earnings to South Dakota, they are given 4 cents per mile.

Q.—That is to say, that an inter-state ticket is not divided upon a mileage basis pro rata of the amount received for the ticket.

A.—I understand not. I understand Dakota, as a rule, is given 4 cents a mile on inter-state business.

We find that the operating expenses as estimated by Mr. Earling are equal to 82 cents per dollar of revenue, and as estimated on train mile basis are equal to 59.1 cents per dollar of revenue, and as estimated by defendants are equal to 55.2 cents per dollar of revenue.

This would make the local earnings share of the expenses as follows:

On Earling's estimate	$356,974.29
On train mile estimate	257,282.68
On defendant's estimate	240,304.64

The proposed reduction only relates to four cent per mile business, as we simply propose to reduce the maximum from 4 cents per mile to 3 cents per mile. Many passengers are carried on mileage tickets which sell for $25 for 1,000 miles, or $50 with $10 rebate, or $40 net

for 2,000 mile tickets, while others are carried on round trip and excursion tickets.

This makes it necessary to determine how much of the local passenger earnings are earned on four cents a mile tickets.

This information is furnished by Mr. Winnie in "Exhibit 29," page 564, for the period of six months ending October 31, 1896. The Exhibit is as follows:

EXHIBIT 29.

Total Passenger Earnings in South Dakota, Six Months Ending October 31, 1896.

	Total	Amount of Earnings @ 4c per mile
Business local to South Dakota:		
At 4c per mile	$41,990.51	$41,990.51
At 3c per mile	25,527.75	
At 2½c per mile	9,298.00	
At 2c per mile	35,419.72	
At 1c per mile	951.82	
Total local to South Dakota	$113,187.80	
Total inter-state business	69,784.25	69,784.25
Total from all sources	$182,972.05	$111 774.76
Percentage of business @ 4c per mile to total business	61.09 per cent.	
Reduction of 25 per cent. on 61.09 per cent. of $182.972.05		$27,943.69
Percentage of reduction on business @ 4c per mile to total passenger business of South Dakota	15.27 per cent.	

By this table it appears that the total local earnings from passengers amounted $113,187.80, and that of this amount $41,990.51 was earned on the 4 cent tickets; $41,990.51 is 37 per cent. of $113,187.80, and thus we have a basis for our computations.

The local passenger earnings amounted to $226,434.25 ; 37 per cent. of this amounts to $83,780.67.

Now, the reduction from 4 to 3 cents per mile will reduce this portion of the earnings 25 per cent. and will amount to $20,945.16. Deduct this amount from the total local earnings and we have $414,389.34 remaining as the revenue that would have been earned under the proposed schedule.

This would, after deducting the operating expenses as estimated by Mr. Earling, have a net local revenue of $57,415.05 ; and on train mile estimate, $157,106.66 ; and on defendants' estimate, $174,084.70.

We have heretofore found that the passenger traffic should pay $386,920.00 of the 5.69 per cent. interest on the $20,000,000 valuation, or $193,460.00 of the 5.69 per cent. interest on the $10,000,000 valuation.

Apportioning this interest charge on the revenue basis, we find that the interest charge of $386,920 is equal to 66.4 per cent. of the total passenger revenue, and 66.4 per cent. of the local earnings would be $288,961.99 ; and the interest charge of $193,460 is equal to 33.2 per cent. of the total passenger revenue, and 33.2 per cent. of the local earnings would be $144,480.89.

Thus we find that the local passenger revenue after applying the proposed reduction will not pay its proportion of Mr. Earling's expense bill and interest on $20,000,000 valuation, but we do find that it will pay

the expenses as estimated on train mile basis and interest on the $10,000,000 valuation and have a surplus of $12,625.67; and on defendants' estimate of expenses it will yield a surplus of $29,603.71.

From this analysis of the passenger traffic, we find that to support the complainant's bill the Court will have to sustain complainant's valuation of $20,000,000 and Mr. Earling's $1,520,309.92 operating expenses.

We do not believe the Court can sustain the complainant on either of these propositions, so that complainant's bill should be dismissed without any further showing on our part.

However, there are other interesting questions presented by this passenger rate issue.

By "Exhibit 29" we have the data to estimate the number of passengers carried one mile on the several rates, as follows:

$41,990.51, @ 4c	1,049,763	passenger	miles
25,527.75, @ 3c	850,925	"	"
9,289.00, @ 3½c	371,920	"	"
35,419.72, @ 2c	1,770,986	"	"
957.82, @ 1c	95,182	"	"
$113,187.80	4,138,776		

These figures show that the average per passenger mile is 2.73 cents. That on 3,089,011 passenger miles, or 74.5 per cent. of the passenger miles, the revenue is 3 cents or less, and 2,142,906 passenger miles, over one-half of the total, is on 2 and 2½ cents mileage.

We have no statistics at hand with which to make comparison, but the travel and mileage in South Dakota is certainly more than the average. This is due to the high rates for regular tickets. It is a well known fact that as a rule a great portion of the travel on mileage is by commercial travelers, but in Dakota where the ticket rate is 4 cents a mile, all persons who do, or expect to travel 1,000 miles a year or go upon a journey of 1,000 miles, buy mileage.

It is only fair to assume that if the tickets could be purchased at three cents a mile there would not be nearly so many mileage books used, as the ordinary traveler would pay three cents rather than invest so much money at one time in a mileage book. That the reduction of the fare increases the travel cannot be doubted. The greater part of passenger travel is not a necessity. There is, of course, a certain portion of the travel that is a matter of business necessity, but by far the greater portion is either for pleasure or because the rates are low enought to make business travel profitable. If the rates are lowered it increases the pleasure travel and makes possible a larger amount of profitable business travel. When we consider the amount of travel that is due to actual necessity it is exceedingly small.

The passenger train mileage for 1897 was 435,717 miles. Using one-half of this amount for six months, 217,858, and dividing the total passenger fares collected

for six months, as shown by "Exhibit 29," we have a total of fares from passengers of 83.9 cents per passenger train mile; while the average on the complainant's railway system was, for 1895, 75.25 cents; 1896, 76.55 cents, and for 1897, 70.87 cents. Thus it is found that complainant is actually receiving more money per passenger train mile in South Dakota than the average on its railway system.

The proposed reduction will amount to $20,945.16 per annum, and on 435,717 train miles will amount to five cents a train mile.

Deduct this from the 83.9 cents per train mile and we have 78.9 cents per train mile—an amount still exceeding the averages above quoted.

Is it possible that complainant cannot afford to move its light passenger trains in South Dakota for the same revenues from passengers that it does upon its other lines, especially when we consider that the passenger trains in South Dakota are made up of ordinary day coaches, and complainant is not put to the expense of hauling vestibuled trains composed of heavy sleeping and parlor cars, as is the case on complainant's other lines of railway?

On this train mile estimate of operating expenses we found that the passenger service should pay $344,120.54; this divided by the passenger train miles, 435,717, gives us an operating expense of 78.9 cents per passenger train

mile. We now find that complainant collects 83.9 cents from passengers, and as reduced by the proposed reduction the fares from passengers would exactly pay this expense, leaving the entire earnings from mail, express and baggage, amounting to 47.9 cents per train mile, as profit.

This concludes our investigation into the facts involved in this controversy.

There is yet another view of this case to be considered, and that is the theory upon which the circuit court disposed of this case. The Court said:

"No court as yet has promulgated any rule as to how this court shall arrive at a true and just valuation upon which to figure local earnings. In the absence of any such rule, this court believes that it is fair and just to first ascertain what per cent. of the total gross earnings in any one year the total local earnings are for that year, and, having ascertained that per cent., to take the same per cent. of the total value of the property as a fair value upon which to fix local earnings. Following out this rule, let us take the four fiscal years immediately prior to the institution of this suit, and ascertain what per cent. the local earnings for these years would have earned upon a valuation thus determined and what reduction of that percentage will be made by the schedule sought to be promulgated by the defendants and which it is stated reduces the present tariff of com-

plainant, speaking in round numbers, of fifteen per cent. on local passenger business and seventeen per cent. on local freight business. The total earnings from all sources of the complainant company on its lines in the state of South Dakota for the fiscal year ending June 30th, 1894, were $1,840,651.79. The total local earnings for freight and passenger services during the same period were $407.606.35. In round numbers this would make the local earnings 22 per cent. of the gross earnings from all sources for the year 1894. 22 per cent. of $10,000,000.00, the value of complainant's property in the state of South Dakota, would be $2,200,000. The local earnings for said year, stated above as $407,606.35. using round numbers, would be 18 5-10 per cent. on said last mentioned sum.

"The total earnings, from all sources, of the complainant company on its lines in the state of South Dakota for the fiscal year ending June 30th, 1895, were $1,236,-680.78. The total local earnings for freight and passenger services during the same period were $330,642.85. In round numbers this would make the local earnings 26 per cent. of the gross earnings from all sources for the year 1895. 26 per cent. of $10,000,000.00, the value of the complainant's property in South Dakota, would be $2,600,000. The local earnings for said year, stated above as $330,642.85, using round numbers, would be 12 7-10 per cent. on said last mentioned sum.

"The total earnings from all sources for the fiscal year ending June 30th, 1896, were $1,557,100.60. The total local earnings for freight and passenger service during the same year were $328,105.95. In round numbers this would make the local earnings 21 per cent. of the gross earnings from all sources for the year 1896. 21 per cent. of $10,000,000, the value of complainant's property in the state of South Dakota, would be $2,100,000. The local earnings for said year, $328,105.95, using round numbers, would be 15 6-10 per cent. on said last mentioned sum.

"The total earnings from all sources for the fiscal year ending June 30th, 1897, were $1,605,210.66. The total local earnings from freight and passenger services during the same period were $311,005.42. In round numbers this would make the local earnings 19 per cent. of the gross earnings from all sources for the year 1897. 19 per cent of $10,000,000, value of complainant's property in the state of South Dakota, would be $1,900,000. The local earnings for 1897, $311,005.42, using round numbers, would be 16.3 per cent. on the last mentioned sum.

"It will thus be seen that the local earnings of the complainant's lines on the same proportion of the total value of the road as the local earnings bear to the gross earnings from all sources in South Dakota were:

For the year 1894	18.5 per cent
For the year 1895	12.7 per cent
For the year 1896	15.6 per cent
For the year 1897	16.3 per cent

"Now, let us ascertain the per cent. which the local earnings of the road for the four years mentioned would produce on the proportionate valuation above stated after being reduced by the proposed schedule of the railroad commissioners:

For the year 1894 the total local freight earnings were $137,459.88, which, being reduced 17 per cent. would equal.... $114,091.70
For the same year, the total local passenger earnings were $270 146.47, which, reduced 15 per cent. would equal..... 229.624.50
These reduced local freight and passenger earnings equal.. $343,716.20

"This reduction on the local business would reduce the total earnings from all sources from $1,840,651.79 to $1,776,761.64, of which amount the reduced local earnings for the year 1894 would be, in round numbers, 19 per cent.; 19 per cent. of $10,000,000 would be $1,900,000, and the local earnings, as reduced, would be 18 per cent. of that amount.

For the year 1895 the total local freight earnings were $121,442.00, which, being reduced 17 per cent, would equal.... $100,796.86
For the same year the total local passenger earnings were $209,200 85, which, being reduced 15 per cent. would equal 177,820.72
Total reduced local freight and passenger earnings.... $278,617.58

"This reduction on the local business would reduce the total earnings from all sources for that year from $1,236,680.78 to $1,184,655.51, of which amount the reduced local earnings for the year 1895 would be, in round numbers, 23 per cent.; 23 per cent. of $10,000,000 would be $2,300,000, and the local earnings for that year, as reduced, would be 12.1 per cent. of that amount.

For the year 1896 the total local freight earnings were $110,432.45, which, being reduced 17 per cent., would equal.... $91,660.93
For the same year the total local passenger earnings were $217,673 50, which, reduced 15 per cent., equal..... 185,022 47
Total reduced local freight and passenger earnings... $276,683.40

"This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,557,100.60 to $1,505,678.05, of which amount the reduced local earnings for the same year would be, in round numbers, 18 per cent., and 18 per cent. of $10,000,000 would be $1,800,000, and the local earnings for that year, as reduced, would be 15.3 per cent. of that amount.

For the year 1897 the total local freight earnings were $102,289.23, which, being reduced 17 per cent., would equal..... $84,900.06
For the same year the total local passenger earnings were $208,716.19, which, being reduced 15 per cent., equal.... 177,408.76
Total reduced freight and passenger earnings..... $262 308.82

"This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,605,210.66 to $1,556,514.06, of which amount the reduced local earnings for the same year would be, in round numbers, 16 per cent. 16 per cent of $10,000,000 would be $1,600,000, and the local earnings for that year, as reduced, would be 16.2 per cent. of that amount.

"It will thus be seen that if the commissioners' schedule of rates and fares had been in effect during the four years that we have considered there would have been an earning on the value of the property apportioned to local earnings of—

18.0 per cent. for the year ending June 30, 1894.
12.1 " " " " " " June 30, 1895.
15.3 " " " " " " June 30, 1896.
16.2 " " " " " " June 30, 1897.

"It certainly would be impossible for this court to find, beyond a reasonable doubt, that these per cents. allowed to be earned by the railroad company for local earnings would be depriving it of its property without due process of law, or depriving it of the equal protection of the laws.

"This being the view of the court, it necessarily results that the bill must be dismissed and the temporary restraining order, granted in this action, dissolved."

The substance of the foregoing language of the circuit court is that the gross revenue equalling those per cents. of the value of the property apportioned to local traffic on the revenue basis was a sufficient revenue for all purposes.

The average per cent. for the four years was 15.72 per cent., and the average, after applying the proposed reduction, for the four years, was 15.4 per cent. It will be seen that the Court apportioned the value of the property to the local traffic on the revenue basis. As we have heretofore contended, this was more than fair to complainant. This, then, leaves us only to inquire as to the correctness of the Court's conclusion that a gross revenue of 15.4 per cent. is a sufficient revenue for all

purposes, with the inference that if it is not sufficient it is because of over-capitalization or mismanagement.

It will be remembered that on pages 5 and 6 of this brief we called attention to the fiscal affairs of complainant for the year 1897, and that we found that the complainant's entire revenue for that year amounted to $30,468,767.99, and equalled 14.3 per cent. of its total capitalization. That out of this 14.3 per cent. gross revenue complainant paid all its operating expenses, taxes, interest and dividends, and over and above all, passed $683,029.06 to surplus.

By reference to page 28 of the annual report for 1897 we find a statement of the gross earnings for the years 1894, 1895, 1896 and 1897. By computation we find the average for the four years to be $30,432,979, or a trifle less than for the year 1897. We find by "Exhibit 58," page 773, that during those years and out of that revenue complainant paid its expenses, interest and dividends. We have no data showing exactly how much was passed to surplus during each of those years, but we do find that at the end of the four years complainant had a surplus on had of $8,509,719.85. This item is designated "income account" and will be found on pages 21 and 22 of the annual report for 1897.

There is no data contained in the record of this case by which comparisons with other railways can be made, but if complainant can pay all its operating expenses,

taxes, insurance, interest and dividends and accumulate a surplus on an annual gross revenue of 14.3 per cent., then why is it that the Circuit Court was not justified in finding that a gross revenue of 15.4 per cent. was sufficient for the purposes of this case?

It has been suggested and may be urged in this case that the circuit court forgot the operating expenses, and treated this 15.4 per cent. as net revenue. The criticism is so entirely without foundation that we would not notice it were it not for the language of the circuit court in the North Dakota case, wherein the Court said:

"Counsel for defendants cites as directly in point a recent decision of the United States circuit court for the District of South Dakota in the case of Chicago, Milwaukee & St. Paul Railway Company vs. Board of Railway Commissioners, which involved substantially the same issues as the cases under consideration. There can be no criticism of the law as declared in the opinion in that case, but the learned judge seems to have proceeded upon a fundamental error of fact. In determining the rate of income which the company was earning upon the value of its property, as fixed by the Court, no allowance whatever is made for operating expenses, but the entire gross receipts of the road are treated as net profits. This error greatly weakens, if it does not destroy, the authority of the opinion."

Northern Pacific Ry. vs. Keyes, 91 Fed. 59

The above language indicates such a complete misconception of the theory upon which this case was disposed of that we cannot refrain from saying that it was the North Dakota court that became entangled with this *fundamental error of fact.*

Not only is the Court sustained in this 15.4 per cent. proposition by the actual results of complainant's transactions for the years named, but the analysis of the facts in this case conclusively show that such revenue is sufficient, and that out of it complainant not only secures enough to pay all charges properly assignable to local traffic, but in addition thereto secures at least a comparatively fair proportion of the surplus it has been accumulating.

We have gone into all the details of the facts involved in this controversy more fully perhaps than was necessary, yet we feel that such detailed examination was proper because the facts concerning the construction and operation of a great railway system are not matters of common knowledge with which the Courts are presumed to be conversant.

The writer has neither constructed nor operated any railway, hence has no knowledge concerning these matters other than that acquired by the preparation and trial of this cause, therefore we cannot and do not assert that our conclusions of fact are absolutely correct, but only that they are the result of the best analysis of this case that we are able to make. If we have at times resorted to

conjecture and guess work, it has been occasioned by the failure of the complainant to produce satisfactory evidence from which the fact could be deduced.

The complainant is in possession of all the record evidence as well as the technical information and, if it had been so disposed, could have exhibited the true state of facts to the Court. That it has not done so is apparent from the records of this case.

We have no desire to characterize any of the witnesses called by the complainant in this case, but we do feel that the complainant has been very reckless in many of the statements presented to the Court. We can only account for this upon the theory that the testimony was produced with a feeling of immunity from successful contradiction.

Complainant was in possession of the only record and of the information concerning the cost to acquire, maintain and operate these lines of railway. With this monopoly of information and this feeling of security, the complainant has neglected to produce its testimony with that degree of care and good faith required by courts of equity.

We submit, may it please the Court, that the complainant is not entitled to the relief demanded.

Respectfully submitted.

T. H. NULL,

Solicitor and of Counsel for Defendants.

Huron, S. D., Sept. 15, 1899.

Brief and Argument for Defendants

Supreme Court of the United States.

OCTOBER TERM, 1899.

No. 131.

THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Appellant,
vs.
WILLIAM H. TOMPKINS, W. T. LAFOLLETTE and ALEXANDER KIRKPATRICK, constituting the Board of Railroad Commissioners of the State of South Dakota, et al,
Defendants.

It is claimed, in the brief filed by the appellant, that the Circuit Court did not take into consideration the local operating expenses, but a careful review of the case and of the decision of the Circuit Court will disclose the fact that this claim is entirely without foundation. It is also claimed that the Circuit Court stopped in its computation before it had reached the end of the problem which was presented to it for solution. A careful examination of appellant's brief, however, discloses the fact that it is counsel for the appellant that have fallen into this error and not the Circuit Court. One pecul-

iarity about the figures presented by counsel for appellant is, that no matter what the charges may be for local business and the transportation of local freight and passenger business, and no matter what schedule might have been adopted by the Railroad Commission, still the result, if the figures of percentages presented by counsel for appellant are correct, and if the theory of the case presented by them is correct, would come out exactly the same. That is if the local charges made by the appellant Company were four times what they are now, and the figures presented by appellant's counsel and their theory are correct, still the result must necessarily be that the defendants have no right to make reductions because the formula, upon which the calculation depends, would show that the local business was being conducted at a loss, and if the local charges were only half what they are at present, the result of the computatations, made by appellant, would be no different than if they were four times as large, or ten times as large, and the line of reasoning adopted by appellant's counsel, if the same should be adopted by the Court, would apply to any possible rate case that might arise on appellant's lines, for the simple reason that the one fact which is most important of all others as applied to the present case, and of which counsel for appellant have entirely lost sight, is the fact that while the cost of "*conducting transportation*," which enters into the operating expenses, is about two and one-half or three times as large as the cost of "conducting transportation" on other business, that the *actual charges* for the local business are four times what they are on the average of the Company's business; and instead of applying the calculations upon the actual charges made by the Company for conducting local business, they are applied solely upon the averages of all the business of the Company as a whole. This is shown to be true by reference to page 43 of appellant's brief, where they say, "The Court

below said it could not find the actual cost of conducting the local business, but it is certain that the Court could have found that it cost as much as it did to do the business of the system as a whole." This might all be true, and yet it might cost a very much less per cent. of the actual earnings to do such business than it does of the business as a whole, because while the cost of "conducting transportation," which is the only item that is increased in the several items entering into the cost of operation, is increased two and one-half or three times, and the total cost of local operation is increased so that it is not to exceed double at the outside on appellant's own figures of what it is on the business as a whole, the local earnings instead of being twice what they are on the system as a whole, are four times as much for unit of service; thus it will be seen that if it cost sixty per cent. to do the business as a whole, and cost just the same price to do the local business, and if the local business brought in an income of four times that of the business as a whole, that the profits of such business must be enormous, and the percentage of cost on such basis for conducting the local business would be fifteen per cent. of the receipts of such business, and if the cost of such business were three times as much as that of the average of the Company's business, then the cost of such business would be forty-five per cent. of the receipts of such business, leaving still a very large profit, and upon which the reduction made by the Commissioners would still leave a very large margin. It will be observed that the tables presented by counsel for appellant, upon pages 42 to 48, inclusive, also the table on page 55, are all based upon this false assumption, that the receipts for local earnings are the same as the receipts of the average of the Company's business. For instance, they say that it necessarily follows that if the cost of operating expenses on the system as a whole is sixty per cent. of the earnings, then it follows that on account of increased cost of

conducting the local business, that it will cost not less than eighty-five per cent. of the earnings to conduct the local business. This theory assumes as a basis that the charges made by appellant for such local earnings are precisely the same as that of the average of the Company. While as a matter of fact, as shown by the analysis of the testimony in Mr. Null's brief, on page 144, that while the average cost of conducting freight is about one cent per ton per mile, that the receipts from this local freight is 4 66-100 cents per ton per mile, so that there is absolutely no foundation for the contention that the testimony shows that it would cost eighty-five per cent. of this 4 66-100 cents per mile to conduct the local transportation. In fact, the result of the calculations, if based upon the actual receipts for such business, shows that it cost less than fifty per cent. A careful inspection of the argument, appearing on pages 38 and 39 of brief of counsel for appellant, clearly shows that their formula for making calculations throughout is based upon average receipts, and not actual receipts. For instance, again it is shown (page 25 appellant's brief) that the actual local earnings for four years from freight was $471,623.56, now counsel assume that because the cost of conducting the business as a whole amounts to sixty per cent., that it necessarily follows that it will cost sixty per cent. to conduct this business with the additional cost made necessary by the nature of the business on account of its local character. This would be true if the receipts from such business were the same as the receipts for the same service on the system as a whole, but as clearly shown, this is not the case, but, instead of being the same, such receipts are four times that of the business of the system as a whole. The fact that the receipts from the local business or the short haul business are largely in excess of those of the system as a whole will be made perfectly plain by a merely

casual inspection of the Defendants' Exhibit 68, appearing on page 801, by the Defendants' Exhibit 16, appearing on page 175 of the Record, and also from the table of distances, appearing on page 891 of the Record, and instead of the Circuit Court proceeding upon a "*fundamental error of fact*," as said by Judge Amidon in the North Dakota case, it is counsel for appellant and Judge Amidon who were proceeding upon the fundamental error of *assuming* that the receipts for local business were no more for each unit of service than the receipts of the system as a whole. It is conceded that no separate account of local operating expenses are kept, or can be kept, by the Railway Company (page 15 of appellants' brief,) and hence, while it is proper to estimate the additional cost of conducting such business, account must also be taken of the fact that a very large increase of revenue is charged for performing this service. It is claimed by counsel for appellant (page 47 of their brief,) that a reduction of gross earnings amounting to any given per cent. necessarily works a much larger percent-of reduction in the net earnings. They then proceed and prepare another table of percentages to prove this result, but again apply the eighty-five per cent. theory for the purpose of demonstrating that the Circuit Court has allowed them no remuneration for their service. While it is true that a reduction of a per cent. of a gross earning necessarily makes a larger per cent. of reduction upon net earnings, yet it is not fair to make the calculation upon the assumption that the receipts for the local earnings are the same for unit of service as the receipts for average of the business as a whole. The tables on pages 50, 51 and 52 especially are all prepared upon this false assumption, that the average earnings for unit of service of the system as a whole are the amount that is charged for the service on the local business, and hence the results of such tables and such figures amount to nothing, and are merely misleading. For instance, it is

claimed that it cost $114.17 for every $100 earned; by merely adding to the cost of the service the increased cost of operating expenses and taking no account of the increased revenue received for such service this might be true. While if you take account of the increased revenue received from such service, and then apply the percentages claimed by counsel for appellant, it will be found that that the plaintiffs already receive more than $200 for every $100 cost of operating expenses. Again, it is said on page 55 of appellant's brief, "Nothing can be more certain under the testimony than that eighty-five per cent. is a low estimate of local operating expenses in South Dakota, and yet when we come to examine the calculations (pages 38 to 45,) we find that this eighty-five per cent. is based upon the cost of conducting the business as a whole, with added cost of local business, and makes no account of the actual receipts from such business. Again, on page 75, a table is prepared of results if operating expenses are no greater locally than upon the system, leaving out of view entirely the fact that while the local operating expenses are much greater and are conceded to be, still *it does not necessarily follow that they are a greater per cent. of the actual receipts* from such business because the actual receipts are so much greater than the average receipts of the business of the Company as a whole for the same service. This is the vice that pervades the whole of the argument of counsel for appellant.

We do not believe that the Supreme Court can say, from the evidence presented in this Record, that the Circuit Court has erred in fixing the value of the property, which should be designated as property used in conducting the local business, at $10,000,000. It is true that some regard perhaps should be paid to the fact that the property is bonded for a large amount in excess of this valuation, provided that it should be shown that the bonds were given in recent years and were sold upon the

open market, because that might be some test as to the value of the property, but when the bonds were issued years ago, or were issued as refunding bonds taking up prior issues, the fact that the property is bonded for a sum largely in excess of what it would cost to reproduce it, would furnish very little, if any, evidence of the present value of the property, but the question of the cost of the property and the present value of the property has been so thoroughly discussed in the principal brief prepared by Mr. Null, that I deem it unnecessary to go into any extended discussion of that subject, but have thought it proper, owing to the importance of the case, to point out what seems to me to be some of the vital errors in the presentation of this case, as disclosed by the brief of the counsel for the appellant, and believe that a careful inspection of the Record will disclose the fact that this is a vital error into which counsel for appellant have fallen, and one which must necessarily be decisive and conclusive of the question before the Court and necessarily effects the result of the calculations made by counsel for the appellant in their brief, because they have made no calculation whatever and no argument in which this error is absent, hence all assignments of error made on such basis must fail. Railway Commissioners would be of no value whatever so far as fixing maximum rates is concerned, if the theory adopted by counsel for appellant should prevail, because the same result would follow any schedule that might be adopted and under any conditions in any road in which the local business is but a very small per cent. of the entire business of the Company.

We therefore respectfully submit that there was no error committed by the Circuit Court, and that the judgment of the Circuit Court shall be affirmed.

Respectfully submitted,

JOHN L. PYLE,
Attorney General of the State of South Dakota,
and of Counsel for defendants.

No. 396 131

Motion to Advance

OFFICE SUPREME COURT U.S.
FILED
FEB 25 1899
JAMES H. McKENNEY,
Clerk

IN THE

SUPREME COURT

OF THE

United States.

Filed Feb. 25, 1899.

OCTOBER TERM, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY,
Complainant and Appellant,

vs.

W. H. TOMPKINS, W. T. LAFOLLETTE and ALEXANDER KIRKPATRICK, Constituting the Board of Railroad Commissioners of the State of South Dakota, Defendants and Respondents.

No. 396.

Motion.

Counsel for the Appellees.

Attorney General of the State of South Dakota.

IN THE

SUPREME COURT

—OF THE—

United States.

OCTOBER TERM, 1898.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, Complainant and Appellant,

vs.

No. 396.

W. H. TOMPKINS, W. T. LaFOLLETTE and ALEXANDER KIRKPATRICK, Constituting the Board of Railroad Commissioners of the State of South Dakota, Defendants and Respondents.

Motion.

Come now the defendants, appellees, by their counsel appearing in that behalf and move the court to advance the above entitled cause for argu-

ment and hearing because this action was begun in the Circuit Court in and for the district of South Dakota, to enjoin the defendants as a board of railroad commissioners from the publication and promulgation of a certain schedule of reasonable maximum rates of fares for the transportation of passengers, freight and cars by railways in the state of South Dakota, which schedule had been adopted by the defendants and was about to be published and promulgated as provided by the laws of the state of South Dakota, and particularly Chapter 110 of the Session Laws of 1897, relating to common carriers, that at the time of the commencement of this action a temporary injunction was granted, and, notwithstanding a decree in favor of the defendants upon the merits, continued in force to the present time and during the proceedings upon appeal in this court.

That the reduction in charges for transportation that will result from the enforcement of the proposed schedule will amount, as estimated by complainant, on the basis of the business transacted during the years 1894, 1895, 1896 and 1897, to $682,164.70 in freight, and $227,912.07 in passenger business, or an average annual reduction of $170,-541.17 on freight and $56,978.01 in passenger business on complainant's railway in South Dakota. See Exhibit 31, page 566 of the record. That this case is in effect a suit against the state and of great public interest.

That no adequate provision has been, nor can be made for the protection of the people of South Dakota against over charges pending this appeal except to leave each shipper or passenger to an individual suit to recover such over charge.

Wherefore, the defendants and respondents respectfully move the court to advance this cause for argument so that the same may be argued and finally submitted during the present term of this court, and suggest that the same be set down for argument at such time during the month of April as will suit the convenience of the court.

J H Null
Counsel for the Appellees.

John L Pyle
Attorney General for the State of South Dakota.

Notice of Motion.

Chicago, Milwaukee & St. Paul Railway Company, Complainant and Appellants,

vs.

W. H. Tompkins, W. T. LaFollette and Alexander Kirkpatrick, Constituting the Board of Railroad Commissioners of the State of South Dakota, Defendants and Respondents.

To Messrs. George R. Peck and A. B. Kittredge, counsel for appellants:

Please take notice that on Monday, the 27th day of February, 1899, at the opening of the Court

or as soon thereafter as counsel can be heard, the motion of which the foregoing is a copy will be submitted to the Supreme Court of the United States for the decision of the said Court thereon.

Counsel for the Appellees.

Attorney General of the State of South Dakota.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY COMPANY *v.* TOMPKINS.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF SOUTH DAKOTA.

No. 131. Argued October 31, November 1, 1899. — Decided January 22, 1900.

The State of South Dakota having passed an act providing for the appointment of a board of railroad commissioners, and authorizing that board to make a schedule of reasonable maximum fares and charges for the transportation of passengers, freight and cars on the railroads within the State, provided that the maximum charge for the carriage of passengers on roads of the standard gauge should not be greater than three cents per mile; and that board having acted in accordance with the statute, and having published its schedule of maximum charges, the Chicago, Milwaukee and St. Paul Railway Company filed the bill in this case in the Circuit Court of the United States for the District of South Dakota, seeking to restrain the enforcement of the schedule. The railroad commissioners answered fully, and testimony was taken before an examiner upon the issues made by the pleadings. This testimony was reported without findings of fact or conclusion of law. The case went

Statement of the Case.

to hearing. The Judge, without the aid of a master, examined the pleadings and the mass of proof. He made findings of fact and conclusions of law; delivered an opinion; and rendered a decree dismissing the bill. This court is of opinion:

(1) That neither the findings made by the court, nor such facts as are stated in its opinion, are sufficient to warrant a conclusion upon the question whether the rates prescribed by the defendants were unreasonable or not, and that the process by which the court came to its conclusion is not one which can be relied upon;

(2) That there was error in the failure to find the cost of doing the local business, and that only by a comparison between the gross receipts and the cost of doing the business, ascertaining thus the net earnings, can the true effect of the reduction of rates be determined;

(3) That the better practice would be to refer the testimony, when taken, to the most competent and reliable master, general or special, that can be found, to make all needed computations, and find fully the facts; so that this court, if it should be called upon to examine the testimony, may have the benefit of the services of such master.

On February 3, 1897, the legislature of South Dakota passed an act relating to common carriers. Laws of 1897, c. 110. The act provided for the appointment of a board of railroad commissioners, and by section 20 this board was authorized to make a schedule of reasonable maximum fares and charges for the transportation of passengers, freight and cars on the railroads within the State. There was a proviso in the section that the maximum charge for the carriage of passengers on roads of standard gauge should not be greater than three cents per mile. On August 26, 1897, the board of railroad commissioners, having taken the preliminary steps required by the statute in respect to notice, etc., made and published its schedule of maximum charges for the control of all local railroads. On the next day the Chicago, Milwaukee and St. Paul Railroad Company, plaintiff and appellant, filed its bill in the Circuit Court of the United States for the District of South Dakota, seeking to restrain the enforcement of such schedule. The bill alleged generally that the existing rates were fair and reasonable; that those established by the railroad commissioners were unjust and unreasonable; would not only fail to afford the plaintiff adequate compensation for

the services to be performed, but also would operate to deprive it of its property without just compensation. The railroad commissioners filed their answer on October 4, 1897, in which they alleged that the existing rates were extortionate and unreasonably high — in many instances so high as to prohibit the shipment of ordinary products; that the freight rates were much higher than those charged by the complainant company for similar services upon its lines of railway in other and adjoining States, being about ninety per cent higher than the rates charged in the State of Iowa; that the passenger rates were at least twenty-five per cent higher than those charged by the plaintiff over its lines of railway in other States, and much higher than those charged by other railway companies for like transportation in other States. In addition to these matters the answer averred that the plaintiff and the Chicago and Northwestern Railway Company were owners of competing lines of railway, running westerly from Chicago and traversing the States of Illinois, Wisconsin, Minnesota and Iowa; that during the years from 1880 to 1883 as competing companies they constructed their lines of railway into and through that part of the then Territory of Dakota, now the State of South Dakota; that at that time there were no people, business or industry to be accommodated or served by the construction of said lines of railway, and that the construction was not in response to any existing demand for the same, but was for the purpose of preëmpting and occupying the Territory in anticipation of its settlement and development; that a rapid occupation followed such extension of railroad lines, and a large immigration flowed into the Territory; that this rapid immigration ceased in 1884, and that many of the settlers disappeared in the years following, so that in certain portions of the Territory there was almost a depopulation; that going in thus early the plaintiff acquired its right of way, depots and terminal grounds at a substantially nominal cost; that the capitalization of the railroad, in stocks and bonds, was fixed during this period of excitement and rapid immigration, had never been changed, and was extravagantly high. The answer also contrasted the value of

the property as shown by such capitalization in stocks and bonds and that returned by the railroad company to the State for the purposes of taxation. It also averred that the Dakota lines were of much greater earning value to complainant than the mere *pro rata* mileage of the lines in that State would indicate, and that no account had been taken or allowance made for the value to the plaintiff of the long haul business done on other parts of its lines afforded by the interstate business running into Dakota. Upon the issue thus presented by these pleadings testimony was taken before an examiner. This testimony is preserved in the record, and amounts to several hundred printed pages. The examiner simply reported the testimony, without any findings of fact or conclusions of law. The case went to hearing before the District Judge, who, without the aid of a master, examined the pleadings and this volume of testimony, and, on July 20, 1898, rendered a decree dismissing plaintiff's bill. 90 Fed. Rep. 363. Besides delivering an opinion, the court made the following findings of facts and conclusion of law:

"This cause came on to be heard upon the pleadings and proofs at this term and was argued by counsel; and thereupon, upon consideration thereof, the court finds the following facts:

"I. That the value of complainant's property in the State of South Dakota is ten million dollars.

"II. That the fair value of the proportion of complainant's said property assignable to local traffic was, for the year ending June 30, 1894, $2,200,000, and for the year ending June 30, 1895, $2,600,000, and for the year ending June 30, 1896, $2,100,000, and for the year ending June 30, 1897, $1,900,000.

"III. That the gross local earnings of complainant in the State of South Dakota for the fiscal year ending June 30, 1894, was $407,606.35, and for the year ending June 30, 1895, was $330,642.85, and for the year ending June 30, 1896, was $328,105.95, and for the year ending June 30, 1897, was $311,085.42.

"IV. That the local earnings on the complainant's lines under existing tariffs, on the same proportion of the total

value of the roads in South Dakota as the local earnings bear to the gross earnings from all sources in South Dakota, were: For the year 1894, 18.5 per cent; for the year 1895, 12.7 per cent; for the year 1896, 15.6 per cent; for the year 1897, 16.3 per cent.

"V. That applying the schedule of rates sought to be enjoined in this action to the local traffic during the years above mentioned, on the same method of calculation, the value of complainant's property assignable to local traffic would be for the years ending June 30, 1894, $1,900,000; June 30, 1895, $2,300,000; June 30, 1896, $1,800,000; June 30, 1897, $1,600,000.

"VI. Under the commissioners' schedule the gross earnings from local traffic would have amounted to the sum of $342,381.98 for the year ending June 30, 1894, and $277,518.40 for the year ending June 30, 1895, and $275,607.79 for the year ending June 30, 1896, and $261,295.21 for the year ending June 30, 1897.

"VII. That these earnings for the fiscal year 1894 would equal 18% of the value thus ascertained, and for the year 1895 would equal 12.1%, and for the year 1896 would equal 15.3%, and for the year 1897 would equal 16.2%.

"VIII. That owing to the small difference between the percentage earned under the complainant's schedule of rates and fares and the commissioners' schedule of rates and fares for the four years prior to the commencement of this suit, and owing further to the amount of the percentages which would have been earned during said four years under the commissioners' schedule, the court is unable to find beyond a reasonable doubt that the local earnings under said commissioners' schedule would not during the years aforesaid have earned the reasonable cost of earning said local earnings and some reward to the owner of the property over and above said cost of operation.

"IX. That the court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30, 1894, 1895, 1896 and 1897 was.

"X. As a conclusion of law the court finds that the enforcement of the proposed schedule of reasonable maximum rates

and fares will not deprive the complainant of its property without due process of law or deprive it of the equal protection of the laws, or operate to take the property of complainant for public use without just compensation."

From the decree thus entered the plaintiff took its appeal to this court.

Mr. A. B. Kittredge and *Mr. George R. Peck* for appellant.

Mr. T. H. Null and *Mr. John L. Pyle* for appellees. *Mr. W. O. Temple* was on their brief.

Mr. Justice Brewer delivered the opinion of the court.

Few cases are more difficult or perplexing than those which involve an inquiry whether the rates prescribed by a state legislature for the carriage of passengers and freight are unreasonable. And yet this difficulty affords no excuse for a failure to examine and solve the questions involved. It has often been said that this is a government of laws and not of men; and by this court, in *Yick Wo* v. *Hopkins*, 118 U. S. 356, 369: "When we consider the nature and the theory of our institutions of government, the principles upon which they are supposed to rest, and review the history of their development, we are constrained to conclude that they do not mean to leave room for the play and action of purely personal and arbitrary power."

When we recall that, as estimated, over ten thousand millions of dollars are invested in railroad property, the proposition that such a vast amount of property is beyond the protecting clauses of the Constitution, that the owners may be deprived of it by the arbitrary enactment of any legislature, state or nation, without any right of appeal to the courts, is one which cannot for a moment be tolerated. Difficult as are the questions involved in these cases, burdensome as the labor is which they cast upon the courts, no tribunal can hesitate to respond to the duty of inquiry and protection cast upon it by the Constitution. *Railroad Commission cases*, 116 U. S. 307;

Dow v. *Beidelman*, 125 U. S. 680; *Georgia Railroad & Banking Co.* v. *Smith*, 128 U. S. 174; *Chicago, Milwaukee & St Paul Railway* v. *Minnesota*, 134 U. S. 418; *Chicago & Grand Trunk Railway* v. *Wellman*, 143 U. S. 339; *Reagan* v. *Farmers' Loan & Trust Co.*, 154 U. S. 362; *St. Louis & San Francisco Railway* v. *Gill*, 156 U. S. 649; *Covington &c. Turnpike Co.* v. *Sandford*, 164 U. S. 578; *Smyth* v. *Ames*, 169 U. S. 466.

It is often said that the legislature is presumed to act with full knowledge of the facts upon which its legislation is based. This is undoubtedly true, but when it is assumed from that, that its judgment upon those facts is not subject to investigation, the inference is carried too far. Doubtless upon mere questions of policy its conclusions are beyond judicial consideration. Courts may not inquire whether any given act is wise or unwise, and only when such act trespasses upon vested rights may the courts intervene. A single illustration will make this clear: It is within the competency of the legislature to determine when and what property shall be taken for public uses. That question is one of policy over which the courts have no supervision; but if after determining that certain property shall be taken for public uses the legislature proceeds further, and declares that only a certain price shall be paid for it, then the owner may challenge the validity of that part of the act, may contend that his property is taken without due compensation; and the legislative determination of value does not preclude an investigation in the proper judicial tribunals. The same principle applies when vested rights of property are disturbed by a legislative enactment in respect to rates.

In approaching the consideration of a case of this kind we start with the presumption that the act of the legislature is valid, and upon any company seeking to challenge its validity rests the burden of proving that it infringes the constitutional guarantee of protection to property. The case must be a clear one in behalf of the railroad company or the legislation of the State must be upheld.

Such being unquestionably the law, it is obviously of the

utmost importance that the facts shall be clearly and accurately found and distinctly stated by the trial court, and that those facts shall sustain the conclusion reached.

We are of opinion that neither the findings made by the court, nor such facts as are stated in its opinion, are sufficient to warrant a conclusion upon the question whether the rates prescribed by the defendants were unreasonable or not, and we are also of opinion that the process by which the court came to its conclusion is not one which can be relied upon. The court proceeded upon the theory that a comparison of the actual gross receipts of the company from its South Dakota local business with those which it would have received if the rates prescribed by the defendants had been in force was sufficient to determine the question of the reasonableness of these latter rates, and instituted such comparison with respect to the four years preceding the commencement of this suit. Now, it is obvious that the amount of gross receipts from any business does not of itself determine whether such business is profitable or not. The question of expenses incurred in producing those receipts must be always taken into account, and only by striking the balance between the two can it be determined that the business is profitable. The gross receipts may be large, but if the expenses are larger surely the business is not profitable. It cannot be said that the rates which a legislature prescribes are reasonable if the railroad company charging only those rates finds the necessary expenses of carrying on its business greater than its receipts.

In the light of these general and obvious propositions we proceed to examine the computations and reasoning of the court. For reasons which will be apparent hereafter we do not stop to inquire whether its findings are correct deductions from the testimony, but take them as they are stated. It may be premised that the books of the plaintiff, showing its business for the four years, were examined, and so much as was deemed necessary admitted in evidence. From those books was disclosed with mathematical accuracy the gross receipts of the company on all its business in all the States during each of the four years and the actual cost of doing that business

during each of those years; also the gross receipts from the business done in South Dakota, and separately the amount which was received in that State from interstate business and that from local. If the schedule of rates prescribed by the defendants had been in force during the four years, and the same amount of business had been done by the company, the reduction in gross receipts from the passenger business would have been fifteen per cent, and from the freight business seventeen per cent. Of course, the cost of doing the business would be substantially the same. The court found the value of the plaintiff's property in South Dakota to be $10,000,000, although, according to the testimony, it was bonded for over $19,000,000. It held that it was not fair to consider that sum, $10,000,000, the value of the property employed in doing local business, for it was also used in doing interstate business; and that the true way to determine the value of the property which could be regarded as employed in local business was by dividing the total value of $10,000,000 in the same proportion that existed between the amount of gross receipts from interstate business and that from local business, each of which amounts was, as we have seen, accurately shown by the testimony. Upon that basis of division it found that the value of the company's property employed in local business was for the first year, $2,200,000; the second year, $2,600,000; the third year, $2,100,000; and the last year, $1,900,000, and also that the gross receipts from local business were for the first year, 18.5 per cent of the valuation; for the second year, 12.7 per cent; for the third year, 15.6 per cent, and for the last year, 16.3 per cent. In other words, for these several years the company received as compensation for doing its local business the per cent named of the real value of the property used in doing that business. Then, proceeding on the supposition that the defendants' schedule had been in force and the rates reduced as therein prescribed during these four years, it divided the valuation of $10,000,000 on the like proportion of the receipts from interstate business to the receipts from local business as thus diminished, and upon such division found that the valuation of the plaintiff's property engaged in local

business would have been, for the first year, $1,900,000; for the second year, $2,300,000; for the third year, $1,800,000; and the last year, $1,600,000; and upon such basis that the gross receipts from local business would have amounted to 18 per cent of the value of the property for the first year, 12.1 for the second, 15.3 for the third, and 16.2 for the last. Upon this it held that the difference between the per cent of receipts in the two cases was slight, and that there was no change in what may rightfully be called the earning capacity of the property sufficient to justify a declaration that the reduced rates prescribed were unreasonable. In other words, it was of the opinion that the earning capacity was so slightly reduced that it could not be affirmed that the new rates were unreasonable.

But that there was some fallacy in this reasoning would seem to be suggested by the fact that although the defendants' schedule would have reduced the actual receipts 15 per cent on the passenger and 17 per cent on the freight business, the earning capacity for the last year was diminished only one tenth of one per cent. Such a result indicates that there is something wrong in the process by which the conclusion is reached. That there was, can be made apparent by further computations, and in them we will take even numbers as more easy of comprehension. Suppose the total value of the property in South Dakota was $10,000,000, and the total receipts both from interstate and local business were $1,000,000, one half from each. Then, according to the method pursued by the trial court, the value of the property used in earning local receipts would be $5,000,000, and the per cent of receipts to value would be 10 per cent. The interstate receipts being unchanged, let the local receipts by a proposed schedule be reduced to one fifth of what they had been, so that instead of receiving $500,000 the company only receives $100,000. The total receipts for interstate and local business being then $600,000, the valuation of $10,000,000, divided between the two, would give to the property engaged in earning interstate receipts in round numbers $8,333,000, and to that engaged in earning local receipts $1,667,000. But if $1,667,000 worth

of property earns $100,000 it earns six per cent. In other words, although the actual receipts from local business are only one fifth of what they were, the earning capacity is three fifths of what it was. And turning to the other side of the problem, it appears that if the value of the property engaged in interstate business is to be taken as $8,333,000, and it earned $500,000, its earning capacity was the same as that employed in local business — six per cent. So that although the rates for interstate business be undisturbed, the process by which the trial court reached its conclusion discloses the same reduction in the earning capacity of the property employed in interstate business as in that employed in local business, in which the rates are reduced.

Again, in another way, the error of the court's computation is manifested. The testimony discloses that the operating expenses of the entire system during each of the four years were over 60 per cent of the gross receipts. If the cost of doing local business in South Dakota was the same as that of doing the total business of the company, then the net earnings of that local business would not exceed 40 per cent of the gross receipts. Reduce the gross receipts 15 per cent — and the reduction by the defendants' rates was 15 per cent on passengers and 17 per cent on freight business — it would leave only 25 per cent of the gross receipts as what might be called net earnings, to be applied to the payment of interest on bonds and dividends on stock. But the testimony shows that the cost of doing local business is much greater than that of doing through business. If it should be 85 per cent of the gross receipts (and there was testimony tending to show that it was as much if not more) then a reduction of 15 per cent in the gross receipts would leave the property earning nothing more than expenses of operation. These computations show that the method which the court pursued was erroneous, and that without a finding as to the cost of doing the local business it is impossible to determine whether the reduced rates prescribed by the defendants were unreasonable or not.

But here we are confronted by the ninth statement in the findings of fact, to wit, "that the court is unable to find from

the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30, 1894, 1895, 1896 and 1897 was." If the court meant by that to say that there was no testimony tending to show what was the cost of doing local business, we are constrained to say that the statement is erroneous, because there was abundance of testimony bearing upon that question. If it meant simply that it could not determine that fact with mathematical accuracy, basing it upon testimony of the exact amount of money paid out for doing such work, it is undoubtedly true, but there are many things that have to be determined by court and jury in respect to which mathematical accuracy is not possible. Take the ordinary case of condemnation of real estate, the value is to be determined by the trial tribunal, whether jury or court, and yet no one is able to state the exact value. In this very case the court fixed the value of the company's property in South Dakota at $10,000,000, and yet it is impossible from the testimony to say that this conclusion was absolutely accurate, that there was testimony tending to show to a dollar such value. Beyond the figures given from the books of the company of the actual cost of doing the total business of the company there was the testimony of several experts as to the relative cost of doing local and through business. Such testimony is not to be disregarded simply because it cannot demonstrate by figures the exact amount or per cent of the extra cost. It is obvious on a little reflection that the cost of moving local freight is greater than that of moving through freight, and equally obvious that it is almost if not quite impossible to determine the difference with mathematical accuracy. Take a single line of 100 miles, with ten stations. One train starts from one terminus with through freight and goes to the other without stop. A second train starts with freight for each intermediate station. The mileage is the same. The amount of freight hauled per mile may be the same, but the time taken by the one is greater than that taken by the other. Additional fuel is consumed at each station where there is a stop. The wear and tear of the locomotive and cars from the increased stops and in shifting cars from main to side tracks

is greater; there are the wages of the employés at the intermediate stations, the cost of insurance, and these elements are so varying and uncertain that it would seem quite out of reach to make any accurate comparison of the relative cost. And if this is true when there are two separate trains, it is more so when the same train carries both local and through freight. It is impossible to distribute between the two the relative cost of carriage. Yet that there is a difference is manifest, and upon such difference the opinions of experts familiar with railroad business is competent testimony, and cannot be disregarded.

We think, therefore, there was error in the failure to find the cost of doing the local business, and that only by a comparison between the gross receipts and the cost of doing the business, ascertaining thus the net earnings, can the true effect of the reduction of rates be determined.

The question then arises what disposition of the case shall this court make. Ought we to examine the testimony, find the facts, and from those facts, deduce the proper conclusion?

It would doubtless be within the competency of this court on an appeal in equity to do this, but we are constrained to think that it would not (particularly in a case like the present) be the proper course to pursue. This is an appellate court, and parties have a right to a determination of the facts in the first instance by the trial court. Doubtless if such determination is challenged on appeal it becomes our duty to examine the testimony and see if it sustains the findings, but if the facts found are not challenged by either party then this court need not go beyond its ordinary appellate duty of considering whether such facts justified the decree. We think this is one of those cases in which it is especially important that there should be a full and clear finding of the facts by the trial court. The questions are difficult, the interests are vast, and therefore the aid of the trial court should be had. The writer of this opinion appreciates the difficulties which attend a trial court in a case like this. In *Smyth* v. *Ames*, *supra*, a similar case, he, as Circuit Judge presiding in the Circuit Court of Nebraska, undertook the work of examining the testimony,

making computations, and finding the facts. It was very laborious, and took several weeks. It was a work which really ought to have been done by a master. Very likely the practice pursued by him induced the trial judge in this case to personally examine the testimony and make the findings. We are all of opinion that a better practice is to refer the testimony to some competent master, to make all needed computations, and find fully the facts. It is hardly necessary to observe that in view of the difficulties and importance of such a case it is imperative that the most competent and reliable master, general or special, should be selected, for it is not a light matter to interfere with the legislation of a State in respect to the prescribing of rates, nor a light matter to permit such legislation to wreck large property interests.

We are aware that the findings made by the master may be challenged when presented to the trial court for consideration, and it may become its duty to examine the testimony to see whether those findings are sustained, as likewise if sustained by the trial court it may become our duty to examine the testimony for the same purpose. But before we are called upon to make such examination we think we are entitled to have the benefit of the services of a competent master and an approval of his findings by the trial court. As we have said, those findings may not be challenged by either party, and if so a large burden will be taken from the appellate court.

For these reasons we not merely reverse the decree of the trial court but also remand the case to that court with instructions to refer the case to some competent master to report fully the facts, and to proceed upon such report as equity shall require.

END OF CASE